BUILDING **COMMITMENT AND CAPACITY** TO END TB

TUBERCULOSIS REPORT TO CONGRESS

FY19

FEBRUARY 2021

USAID
FROM THE AMERICAN PEOPLE

Photo: Challenge TB / Mbuto Machili

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT REPORT TO CONGRESS ON FISCAL YEAR (FY) 2019 TUBERCULOSIS PROGRAMMING

BUILDING COMMITMENT AND CAPACITY TO END TB

The U.S. Agency for International Development (USAID) submits this report to Congress pursuant to P.L. 110-293, the Tom Lantos and Henry J. Hyde U.S. Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Authorization Act of 2008, Section 302(d), which amended P.L. 87-195, the Foreign Assistance Act of 1961, to add Section 104B(g).

TUBERCULOSIS: THE WORLD'S DEADLIEST INFECTIOUS DISEASE

Tuberculosis (TB) is the world's leading infectious-disease killer. In Calendar Year 2019, TB took the lives of an estimated 1.4 million—more than HIV and malaria combined—and sickened an estimated ten million people.[1]

Across the globe, millions of people suffer and die from this disease each year due to a range of factors including lack of access to services; lack of innovative tools to address the disease; weak health care and laboratory infrastructure; the challenges of diagnosing; difficulties administering and receiving treatment for drug-resistant TB (DR-TB); stigma and discrimination; and high risk of co-morbidities. Early identification of individuals with TB, and immediately ensuring their access to effective treatment, remains a global challenge and is essential for preventing further transmission.

TB also hinders development and prosperity in low- and middle-income countries around the globe. TB disproportionately affects the poorest populations, and further drives individuals and families into poverty. On average, TB patients and their households lose 50 percent of their annual incomes as they suffer from, and receive treatment for, the disease—even where TB services are provided free of charge.[2] In addition, those with TB experience isolation, stigma, discrimination, and the fear of transmitting the disease to loved ones.

Many people with TB have other health issues that further exacerbate their situations. Malnourishment, smoking, alcohol abuse, HIV infection, and diabetes are high-risk co-morbidities for TB. More than 2.2 million people with TB are undernourished, making it difficult for them to complete treatment successfully.[3]

In 2019, the estimated TB cases reported to National TB Programs (NTPs) increased slightly, with 71 percent of global estimated cases reported (as compared to 70 percent in 2018).[4] Globally in 2019, only 57 percent of the 5.9 million pulmonary TB cases were bacteriologically confirmed (the rest were clinically diagnosed).[5] This was a slight increase from 55 percent in 2018, but the proportion has remained almost unchanged since 2005. For comparison, in high-income countries, on average, 84 percent of pulmonary cases were bacteriologically confirmed.[6] Further, only 58 percent (two million) of those bacteriologically confirmed cases globally were detected using the internationally recommended rapid diagnostic test.[7]

It is concerning that increases in notifications in high-TB-burden countries from 2018 to 2019 were associated with a decrease in the proportion of cases that were bacteriologically confirmed. To avoid both missed diagnoses of people who have TB and overtreatment of people who do not have TB, greater efforts are needed to both improve the availability and use of the most sensitive diagnostic tests for TB (such as molecular diagnostic tests) and ensure that international standards for TB care are met. As countries intensify efforts to close gaps between incidence and notifications, bacteriological confirmation of TB cases needs to be monitored to ensure that people are correctly diagnosed and started on the most effective treatment. The aim should be to increase the percentage of cases confirmed bacteriologically.

1 World Health Organization. *Global Tuberculosis Report*, 2020.
2 World Health Organization. *National TB Patient Cost Survey to monitor progress toward the target to eliminate catastrophic costs and help design social protection and universal health coverage*.
3 World Health Organization. *Global Tuberculosis Report*, 2020.
4-7 Ibid.

Photo: USAID/Vision

In 2019, an estimated nearly 465,000 people developed deadlier DR-TB—strains of the disease that are resistant to at least isoniazid (INH) and rifampicin.[8] DR-TB, which includes multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB), remains a global public health challenge in that it is more difficult, and more expensive, to diagnose and treat. One-third of all deaths due to antimicrobial resistance (AMR) are caused by DR-TB. Of the estimated 465,000 people with DR-TB, it is estimated that many acquired the resistant mycobacteria from another infected individual via airborne transmission, as opposed to developing DR-TB because of inadequate treatment.

Of those with DR-TB, only 38 percent started on treatment, and just 57 percent of those who started treatment successfully completed it.[9] Fortunately, individuals who start on treatment regimens with new drugs are achieving much higher treatment success rates. For the first time, the World Health Organization (WHO) provided global estimates for INH resistance, reporting that in 2019, there were 1.4 million new INH-resistant cases. The global TB community must address this emerging issue and strengthen proper diagnosis and treatment of MDR-TB and INH-resistant TB cases.

As an infectious-disease threat anywhere can be a threat everywhere, it is vital that governments of the highest-burden countries, donors, faith- and community-based organizations, the private sector, and other global TB stakeholders take accelerated action and make additional investments to fight the epidemic, safeguard global health everywhere, and reach the ambitious goal of ending TB by 2030.

UNITED NATIONS GENERAL ASSEMBLY HIGH-LEVEL MEETING ON TB

In September 2018, the United Nations General Assembly High-Level Meeting (UNHLM) on TB increased awareness of the disease and set the parameters for the next stage of elimination efforts. At this meeting, Heads of State committed to the ambitious targets of diagnosing and enrolling an additional 40 million people on TB treatment by 2022 (commonly referred to as 40x22)—to include 1.5 million people with DR-TB and 3.5 million children—and enrolling 30 million on TB preventive therapy (commonly referred to as 30x22).[10] Progress has been made to date, but considerable work remains to reach each target.

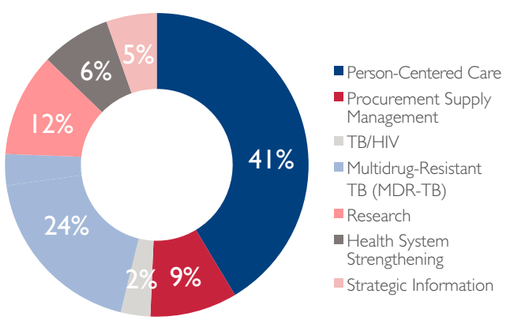
8-9 Ibid.
10 Stop TB Partnership. *UN High-level Meeting on TB Key Targets & Commitments*.

USAID'S GLOBAL TB PROGRAM

With support from Congress and American taxpayers, USAID leads the global TB efforts of the U.S. Government (USG), working with agencies and partners around the world to reach every person with TB, cure those in need of treatment, prevent the spread of new infections, and stop the progression to active TB disease. To achieve this goal, USAID works through the USG Global TB Strategy, the UNHLM on TB Targets, the National Action Plan for Combating Multidrug-Resistant Tuberculosis (National Action Plan), the Stop TB Partnership's Global Plan to End TB, and the WHO End TB Strategy.

In FY 2019, approximately $306 million in resources were programmed for TB activities, appropriated through USAID's Global Health Programs (GHP) account and the Economic Support Fund (ESF) account. This includes programming through bilateral assistance to high-burden countries, regional platforms, and centrally managed mechanisms.

GLOBAL DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



In cooperation with Ministries of Health, USAID provided bilateral assistance in 23 countries with high burdens of TB. Leveraging the U.S. Government's investment in the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund), USAID also provided targeted technical assistance in an additional 32 countries.

USAID played an essential coordination role in each country by working closely with a wide range of multi-sectoral TB stakeholders including Ministries of Health, the Global Fund Secretariat and Principal Recipients, other U.S. Government departments and agencies, WHO, the Stop TB Partnership, civil society, local non-government organizations, faith-based organizations, communities, and the private sector.

USAID is committed to supporting civil society and communities to address stigma, discrimination, gender disparities, and inclusiveness. One of the avenues to support local groups and address these important issues is through our increased investment in the Stop TB Partnership's Challenge Facility for Civil Society. These grants strengthened community and civil-society grassroots organizations to transform the TB response to promote and protect civil rights and gender equality.

FY 2019 ACHIEVEMENTS IN PRIORITY COUNTRIES

4.8M | TB CASES DETECTED

5% | INCREASE IN CASE-NOTIFICATIONS

88% | TREATMENT SUCCESS RATE

109K | INDIVIDUALS WITH DR-TB STARTED ON APPROPRIATE TREATMENT

57K | HEALTH WORKERS TRAINED[11]

6 | RESEARCH STUDIES SUPPORTED THAT FOCUSED ON NEW TREATMENT REGIMEN[12]

DECREASING TB INCIDENCE IN TAJIKISTAN

USAID has supported Tajikistan's TB elimination efforts for more than 20 years, and in September 2019, as part of USAID's Global Accelerator to End TB, the Government of Tajikistan signed a partnership statement with USAID to work more intensively to further reduce the TB burden.

With USAID's support, Tajikistan has seen a dramatic decrease in TB incidence, from 219 per 100,000 in 2000 to 83 per 100,000 in 2019. USAID investments have strengthened diagnostic capacity by scaling up use of GeneXpert instruments within the country, as well as training laboratory staff on proper use and maintenance of the instruments. USAID has supported the development of a diagnostic network with internationally recommended diagnostic capability to cover 70 percent of the population. To ensure maximum use of GeneXpert, USAID also provided extensive technical assistance in updating the NTP's TB diagnostic guidelines to ensure the instrument is utilized as the initial diagnostic test for all persons being evaluated for TB.

Working closely with the NTP, USAID also supported the rapid enrollment of TB patients on appropriate treatment, including on new shorter, safer treatment regimens for DR-TB. Since 2015, more than 75 percent of the estimated TB incident cases were diagnosed and enrolled in treatment; for DR-TB, about 40 percent of the estimated incident cases were enrolled in treatment. To capitalize and continue on this progress, USAID has supported the transition to an electronic TB surveillance and case-management system that enables the NTP and other TB stakeholders to use data for decision-making in real time.

Photo: USAID

11 While health workforce shortages and capacity issues remain, there has been significant progress. Some of the constraints include the limited number of qualified health care workers at the primary health care level with often large workloads.
12 A detailed description of USAID's research studies and clinical trials are outlined in the recently published *Combating Multidrug-Resistant Tuberculosis, Year Four of the National Action Plan Report*.

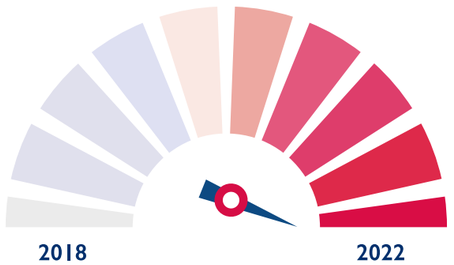
OUR APPROACH: THE GLOBAL ACCELERATOR TO END TB

Launched at the 2018 UNHLM, USAID's Global Accelerator to End TB increases commitment from, and builds the capacity of, governments, civil society, and the private sector to accelerate national progress in reaching the global targets set forth at the UNHLM. The Accelerator focuses on countries with high burdens of TB where the Agency can align with local communities and partners to deliver performance-based results. To ensure the Accelerator's effectiveness and increased transparency, USAID uses standardized data collection and performance-based indicators that align with the targets.

Through the Accelerator, USAID continues to promote prevention strategies, improve patient-centric care, strengthen service delivery, and provide new TB diagnostics and drugs in the fight against TB. To address the specific challenges of MDR-TB patients, USAID is expanding the availability of new MDR-TB drugs and regimens that save lives, as well as investing in pivotal clinical trials. These efforts ensure that people with TB, especially vulnerable populations and those living in poverty, are at the forefront of interventions at all levels of the health system.

Through redefining our development relationship with partner governments, strengthening local institutions, and promoting systemic change, the Accelerator remains increasingly relevant in building countries' local capacities and commitment to address TB. Since its launch, the Accelerator has made significant progress in three key areas to support reaching country TB targets:

GLOBAL
ACCELERATOR
TO END TB



PARTNERING WITH MINISTRIES OF HEALTH: USAID Missions have signed partnership statements with Ministries of Health in 18 USAID TB countries. The statements are the basis for increased collaboration and coordination on interventions to reach the UNHLM targets. To support the commitments made in these statements, USAID is developing intervention-specific TB commitment grants with the Ministries.

SUSTAINABLE TECHNICAL SUPPORT: USAID has embedded nearly 60 advisors in priority countries to build National TB Programs' capacities. Through mentorship and technical expertise, these advisors help improve systems and expand interventions for more sustainable and focused TB programming.

LOCALLY GENERATED SOLUTIONS: USAID has made direct awards to 35 local organizations, including faith-based groups and many new partners. These awards support grassroots solutions and drive community-generated results toward National TB Strategic Plan and UNHLM targets.

ENGAGING CIVIL-SOCIETY ORGANIZATIONS (CSOs) TO FIND MISSING TB CASES IN UGANDA

After Uganda's 2016 national prevalence survey revealed that the burden of TB was higher than previously thought, USAID worked with Uganda's National TB and Leprosy Program to find and treat more TB cases.

Through the Global Accelerator to End TB, USAID signed a partnership statement with the Government of Uganda to strengthen joint efforts for case finding. As part of this, USAID's TB project engaged CSOs to find missed TB cases and improve TB treatment outcomes. The project worked with ten local CSOs within Uganda's Kampala and Wakiso districts to provide TB services at the community level, including contact tracing, community TB screening, sample transportation and return of test results, and TB patient referral.

Since July 2018, these efforts have resulted in the identification of 2,515 TB cases, which would have otherwise been missed. This effort, as well as enhanced facility-based case finding and others, has contributed to Uganda's overall increase in TB case detection from 65 percent in 2018 to 75 percent in 2019.

Photo: USAID / Holly Powers

FOCUS ON RESULTS

In FY 2019, USAID made significant progress toward reaching the targets set forth in the USG's Global TB Strategy and the National Action Plan. In the **23 countries** with bilateral funding, TB incidence decreased by **29 percent**, TB mortality decreased by **47 percent**, and TB case notifications increased by **126 percent** since 2000.

ACHIEVING THE U.S. GOVERNMENT GLOBAL TB STRATEGY TARGETS

Created through an intensive U.S. interagency effort, the USG Global TB Strategy (2015–2019) aimed to help countries achieve key targets in the five-year timeframe, with the ultimate goal of TB elimination by 2050. The strategy is being extended to 2022 to align with the UNHLM targets in USAID TB priority countries.

Through promoting prevention strategies, improving patient-centric care, strengthening service delivery, and providing access to new diagnostics and drugs in the fight against TB, USAID and its partners have achieved three of the USG *Global TB Strategy* 2019 targets.

IN THE 23 USAID-SUPPORTED TB PRIORITY COUNTRIES:

15.9M

TB PATIENTS WERE SUCCESSFULLY TREATED

(surpassing the goal of treating at least 13 million TB patients)

90%

TREATMENT SUCCESS RATE

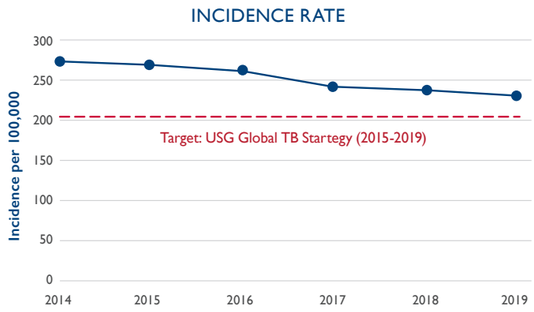
(accomplished two out of the five years)

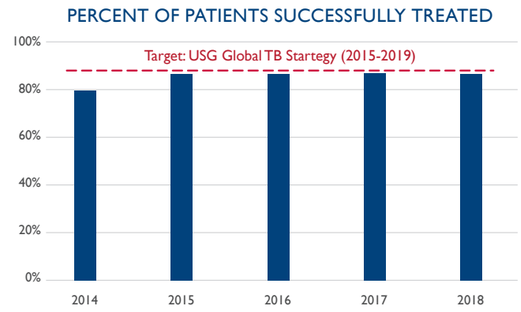
437K+

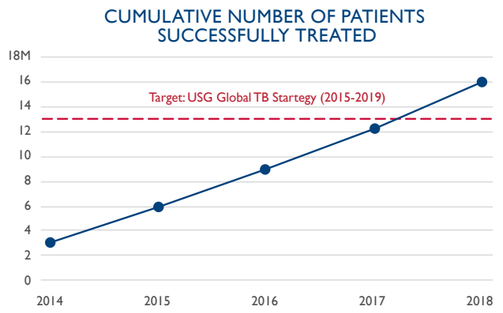
DR-TB PATIENTS STARTED ON TREATMENT

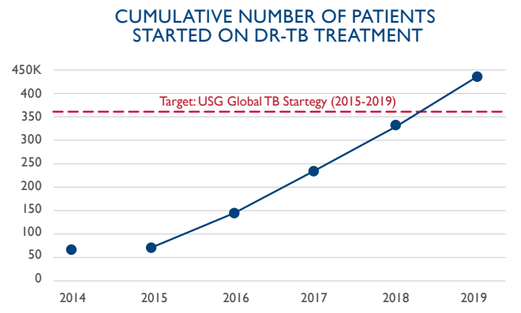
(surpassing the goal of initiating treatment for 360,000 DR-TB patients)

While tremendous progress has been made, the incidence rate decreased by 15 percent since 2014, falling short of the 25 percent decrease goal. However, this incidence rate reduction in USAID-supported countries was higher than the global average (nine percent[13]) during this five-year period.









Highlights over this strategy period include the focus on assessing and expanding case finding and diagnostic network access to all care providers, and the shift to utilizing the internationally recommended rapid diagnostic tools. For example, with USAID support in a pilot project, the Government of India expanded the GeneXpert network from 27 instruments to 1,200 instruments over the strategy period. This expansion resulted in a two-fold increase in DR-TB cases detected and enrolled in treatment (from 29,096 to 58,487). The GeneXpert buy-down allowed the TB community to make that shift. Since 2012, there have been more than 61 million cartridges procured under concessional pricing of $9.98, saving nearly $420 million. This strategic buy-down has allowed countries to procure 41 million more cartridges than they otherwise would have at the previous higher price of $16.86. While there is still a significant way to go, ensuring access to appropriate diagnosis must continue to be a major thrust of the program.

In addition, USAID has also focused on improving data for decision-making over this strategy period. USAID has strengthened the surveillance system from the primary health care level up to the national level. National programs have better quality facility and patient-level data to analyze the situation and focus the needs of the program. In addition, 100 percent of USAID TB countries have completed drug-resistance surveys, and 96 percent have completed TB prevalence surveys. These surveys add valuable data to determine the trend of the epidemic, provide more accurate estimates of the burden of disease, and derive incidence estimates.[14] However, stronger emphasis needs to be placed on using the findings from the surveys to inform assessments on needed actions to further reduce the burden of TB.

13 World Health Organization. *Global Tuberculosis Report*, 2020.

14 Highlights on DR-TB can be found in the *Combating Multidrug-Resistant Tuberculosis, Year Four of the National Action Plan Report.*

IMPROVING DR-TB CASE DETECTION AND TREATMENT INITIATION IN SOUTH AFRICA

South Africa remains among the 30 countries that make up 87 percent of the world's TB burden. The DR-TB burden is also high, with 13,411 DR-TB cases diagnosed in 2019. When 32-year-old Nothabo was diagnosed with MDR-TB in the Eastern Cape province, the diagnosis was overwhelming. "At first it is very difficult," she said. "Twelve months is too long. Taking pills, 21 pills every day? No, I can't. But nurses helped me."

Through the Global Accelerator to End TB, USAID supports South Africa's National TB Program by training health care workers to improve TB case detection and reducing the gap between DR-TB patients diagnosed and those initiated on treatment. In USAID-supported districts, this gap decreased from 34.9 percent in 2016 to 17.1 percent in 2019. In addition, with USAID's support, South Africa has made progress in scaling-up shorter regimens to treat DR-TB, increasing the number of DR-TB cases tested for resistance to second-line drugs, and increasing the number of sites initiating DR-TB treatment—adding 202 additional sites in 2018 to bring the total to 636 sites.

By empowering hospitals and small clinics to offer TB screenings and treatment, patients like Nothabo do not have to travel far to receive care. In part thanks to this support, Nothabo completed treatment in August 2019.

Photo: Incubate Video Productions

LOOKING FORWARD

While notable progress took place in FY 2019, TB remains the world's leading infectious-disease killer, and considerable work remains in reaching the UNHLM targets by 2022. Further, the COVID-19 pandemic will have far-reaching effects, hindering efforts to reach these goals and eliminate TB. Various modeling efforts have highlighted the serious disruption the global COVID-19 response may cause for TB programs and progress. One of these efforts is a modeling study commissioned by the Stop TB Partnership in collaboration with the Imperial College, Avenir Health, Johns Hopkins University, and USAID. This study cites that a minimum of five years of progress will be lost, with global TB incidence and deaths increasing to levels seen between 2013 and 2016. This will equate to an additional six million people falling ill with TB and an additional 1.4 million TB deaths between 2020 and 2025.

USAID remains committed to leading the global response; however, increased efforts and commitments from countries, partners, and donors will be needed to mitigate COVID-19's impact and further accelerate progress to get back on track to meeting targets and ending TB.

USAID TB PRIORITY COUNTRIES

GLOBAL
ACCELERATOR
TO END TB

Photo: USAID / Ben Phillips

APPENDIX

This appendix provides a snapshot into achievements during Fiscal Year (FY) 2019 in each of the 23 countries in which the U.S. Agency for International Development (USAID) provides bilateral assistance to end tuberculosis (TB).

NOTES:

- Unless otherwise noted, notification data is used as a proxy for "diagnosed and started on treatment".
- The charts use 2019 data for the estimated burden.
- The Stop TB Partnership calculated the targets for "40x22" (diagnosing and enrolling an additional 40 million people on treatment for TB by 2022, with a focus on countries with the highest burden of the disease) and "30x22" (enrolling 30 million on preventive therapy for TB) by using the latest estimates generated by the World Health Organization (WHO) for the incidence of TB and the number of notifications available publicly. With the exception of the Republics of India and The Philippines, USAID calculated all projections by using the Tuberculosis Impact Model and Estimates (TIME) model implemented by Avenir Health. To reflect country ambition, USAID adjusted upward the targets for TB treatment in India and the Philippines based on their governments' announcements at the United Nations General Assembly High-Level Meeting on TB (UNHLM) in September 2018. Please note that Stop TB Partnership updated the targets in November 2019 to reflect most recent burden estimates. This report uses the updated targets for 2019 and onward.
- For the purpose of this appendix, "drug-resistant TB" (DR-TB) means a strain of the disease resistant to at least isoniazid and rifampicin.
- Complete data for preventative treatment for TB in 2019 were either partially available or unavailable for the Islamic Republic of Afghanistan; the People's Republic of Bangladesh; Burma; the Kingdom of Cambodia; the Democratic Republic of Congo; the Federal Democratic Republic of Ethiopia; and the Republics of Kenya, Nigeria, South Africa, Tajikistan, Uganda, Zambia, and Zimbabwe.
- Data on the number of TB cases attributable to top risk factors were not available for certain risk factors in some countries. Missing data related to these graphs are noted directly on the graphs.
- The target for preventive treatment for TB includes three categories: under-five child household contacts of bacteriologically confirmed TB cases, household contacts more than five years of age and adults, and persons who were living with HIV (PLHIV). This is in alignment with the goals set at the UNHLM.
- Data on childhood TB from previous years have been inconsistent because of a mixture of programmatic challenges with diagnosing and treating the disease in children, as well as data-reporting problems.
- The charts present the distribution of USAID's Program funding according to the Agency's internal budgeting and finance system, which includes two cross-cutting categories: training and support costs. Training is approximately ten percent across all categories. "Support costs" are defined as system costs to support TB diagnosis and care, including the categories of Health-Systems Strengthening (HSS) and Strategic Information (SI).

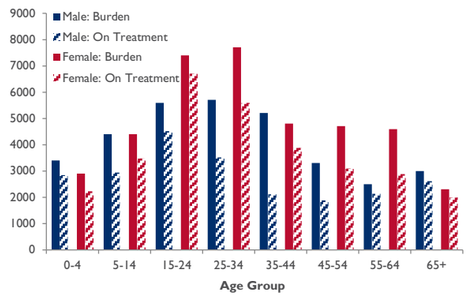
DATA SOURCES:

USAID sourced the data for all of the following pages from internal systems, WHO, the Stop TB Partnership's Global Drug Facility, and National TB Programs (NTPs).

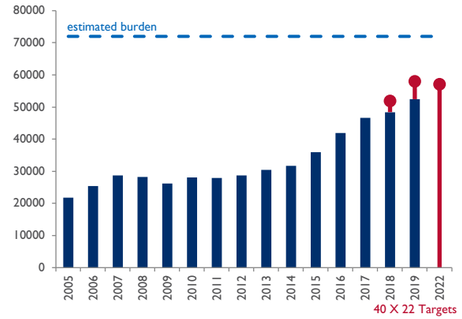
ISLAMIC REPUBLIC OF **AFGHANISTAN**

ISLAMIC REPUBLIC OF **AFGHANISTAN**

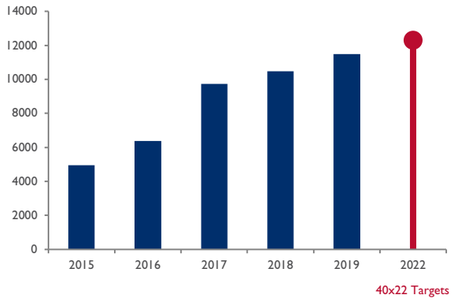
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



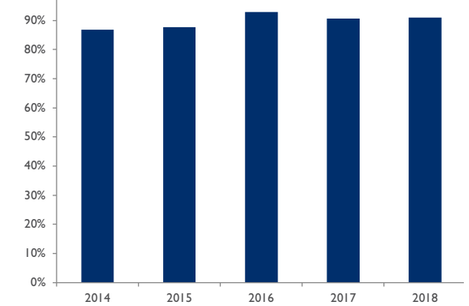
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

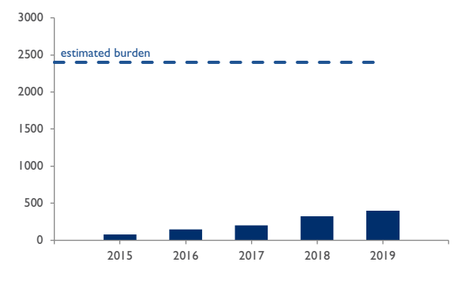


PERCENT OF PATIENTS SUCCESSFULLY TREATED



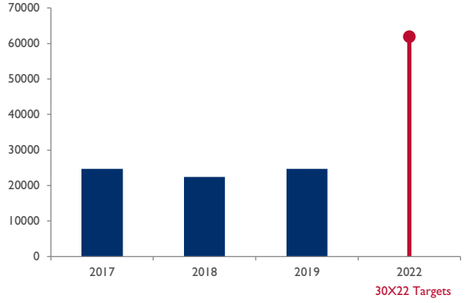
ISLAMIC REPUBLIC OF **AFGHANISTAN**

NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS

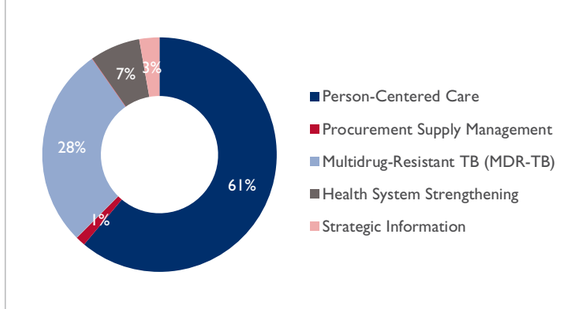


NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS

NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS

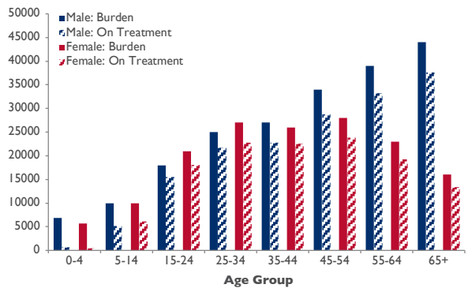


DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS

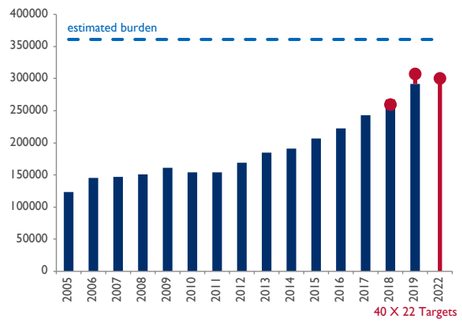


PEOPLE'S REPUBLIC OF **BANGLADESH**

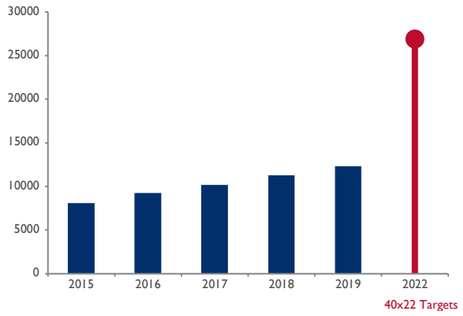
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



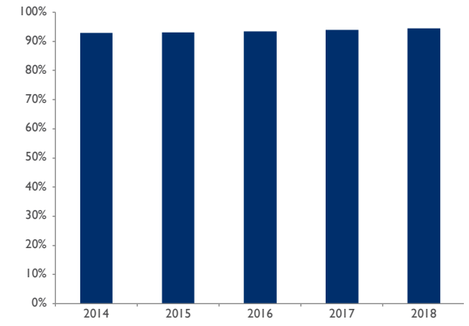
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

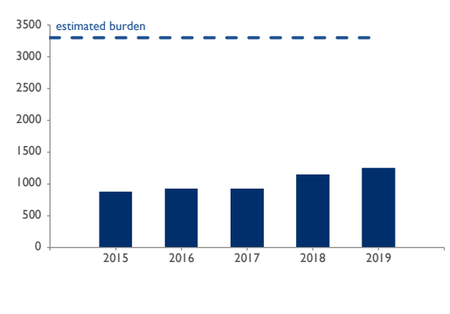


PERCENT OF PATIENTS SUCCESSFULLY TREATED

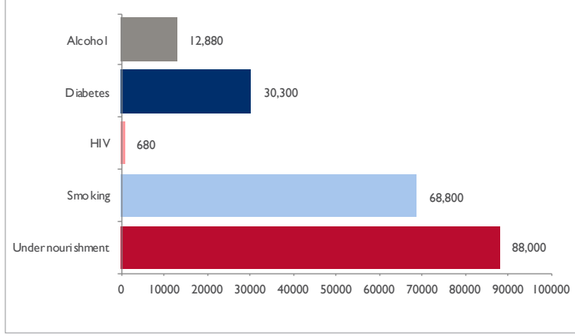


PEOPLE'S REPUBLIC OF **BANGLADESH**

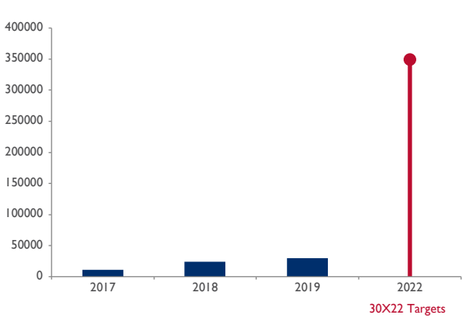
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



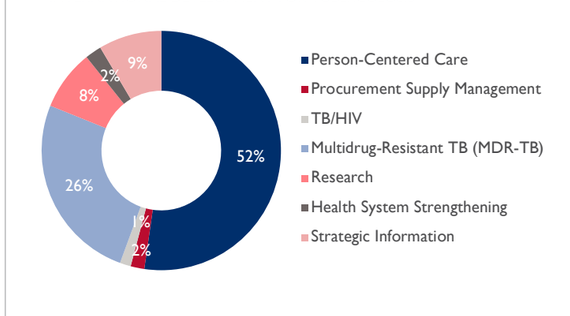
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



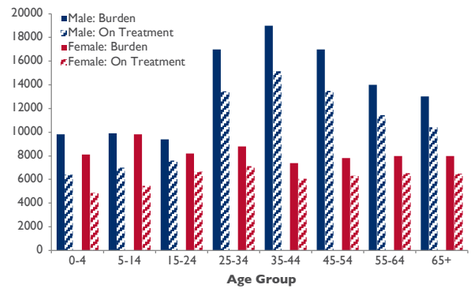
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



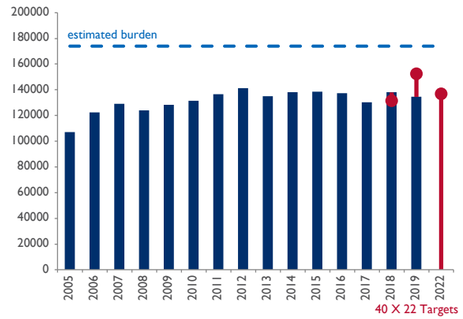
BURMA

BURMA

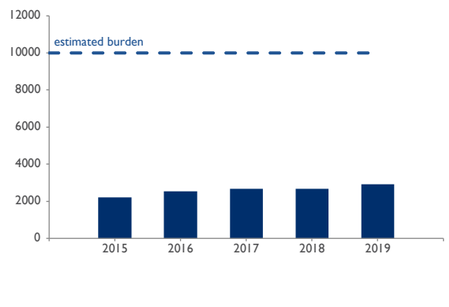
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



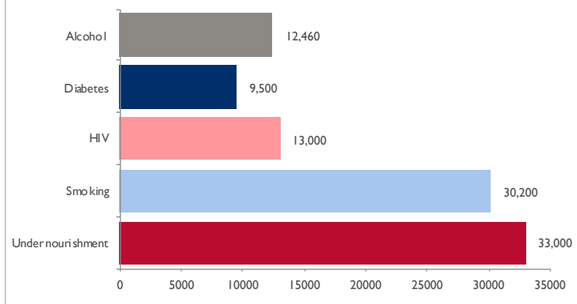
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



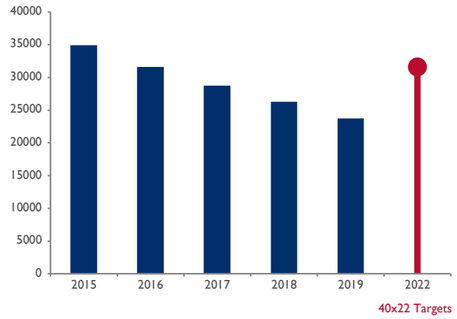
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



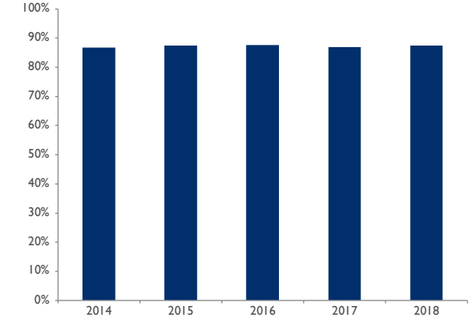
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



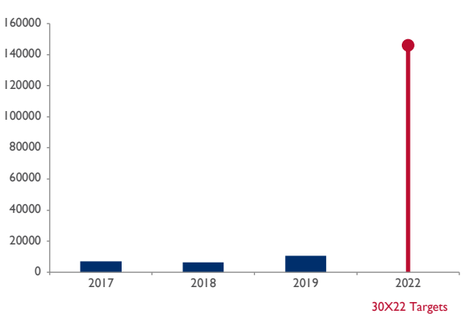
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



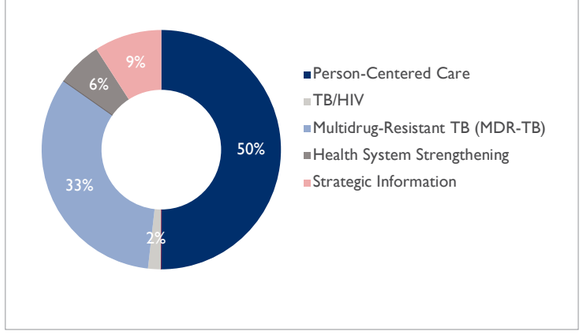
PERCENT OF PATIENTS SUCCESSFULLY TREATED



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS

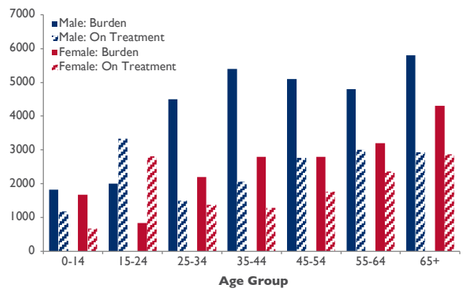


DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS

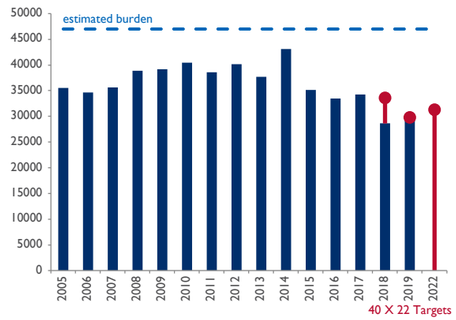


KINGDOM OF **CAMBODIA**

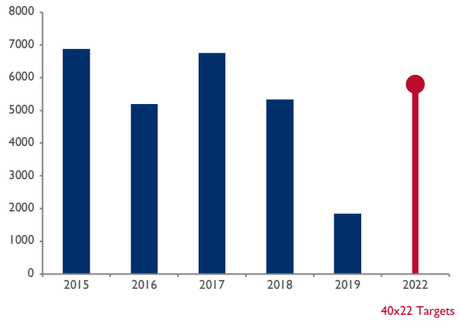
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



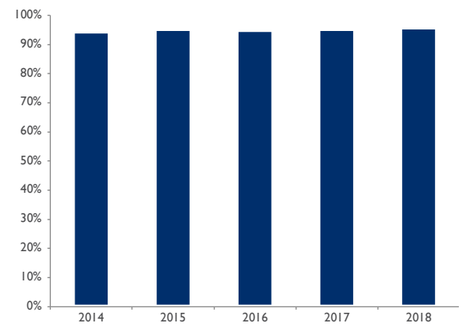
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

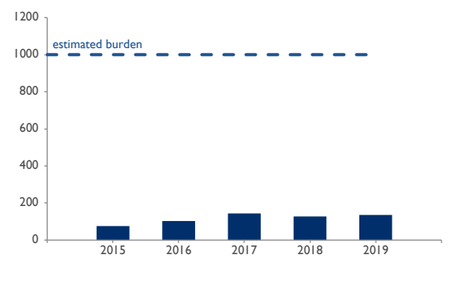


PERCENT OF PATIENTS SUCCESSFULLY TREATED

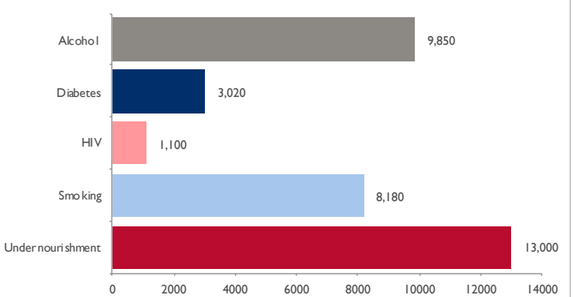


KINGDOM OF **CAMBODIA**

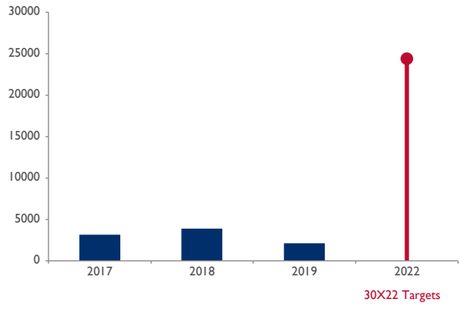
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



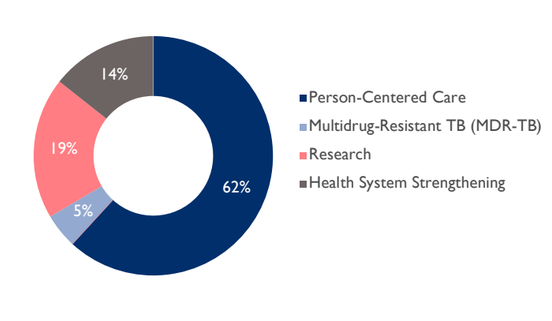
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



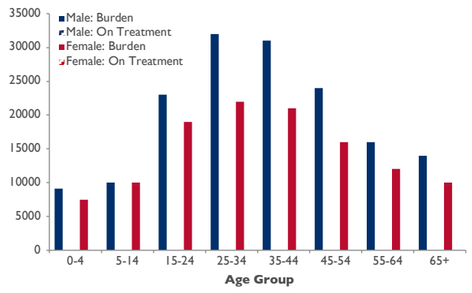
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



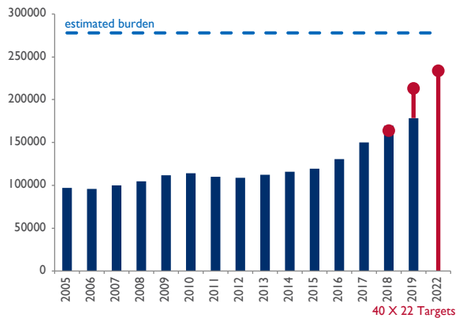
DEMOCRATIC REPUBLIC OF **CONGO**

DEMOCRATIC REPUBLIC OF **CONGO**

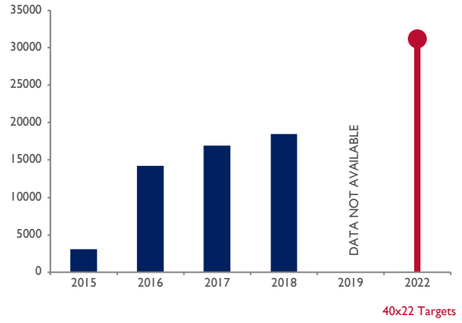
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



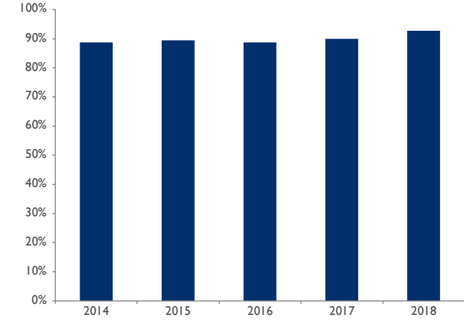
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



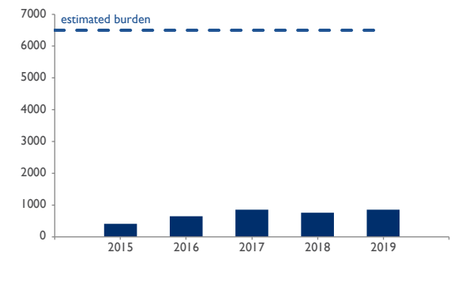
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



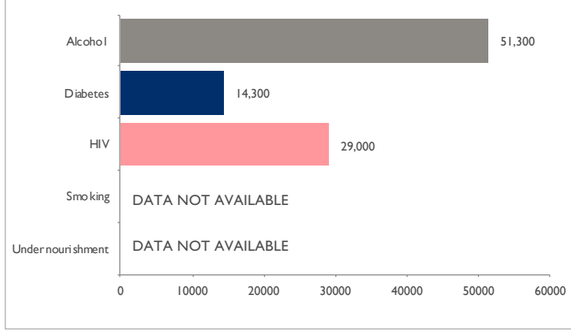
PERCENT OF PATIENTS SUCCESSFULLY TREATED



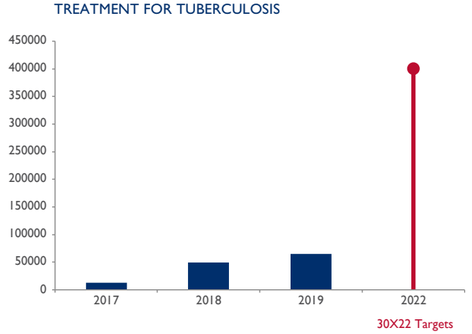
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



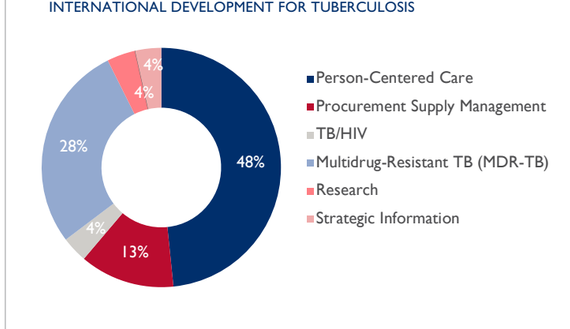
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



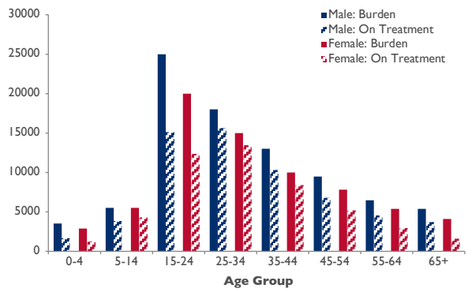
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



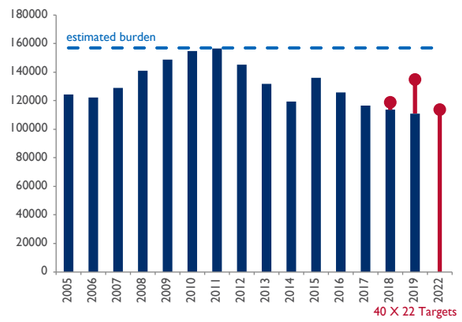
FEDERAL DEMOCRATIC REPUBLIC OF **ETHIOPIA**

FEDERAL DEMOCRATIC REPUBLIC OF **ETHIOPIA**

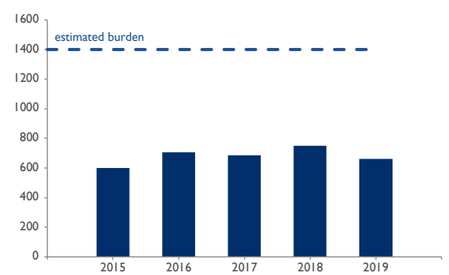
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



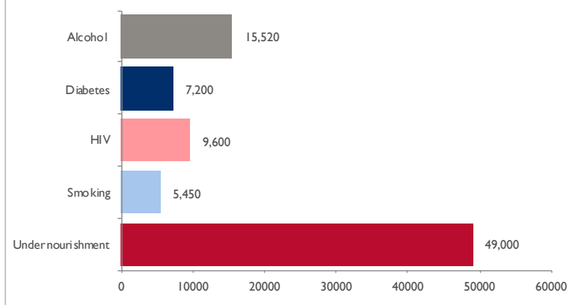
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



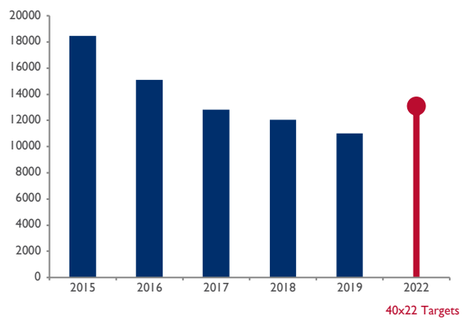
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



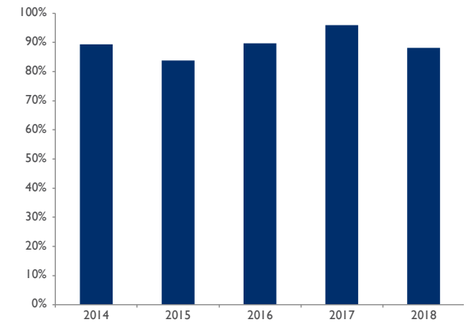
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



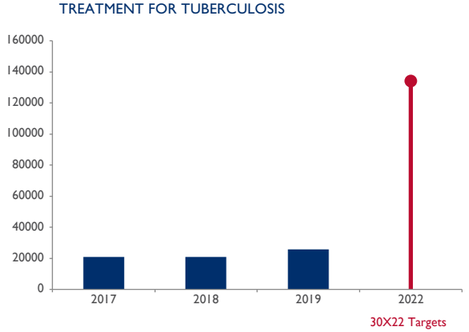
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



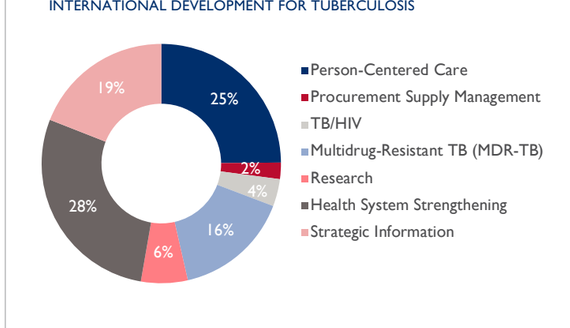
PERCENT OF PATIENTS SUCCESSFULLY TREATED



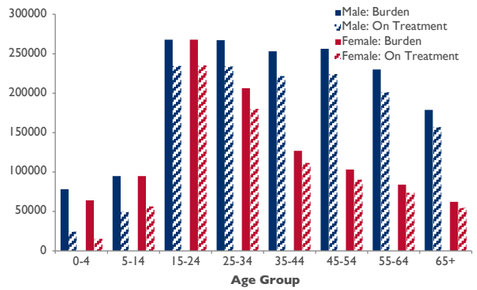
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



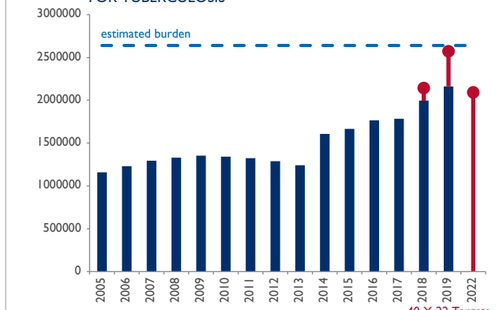
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



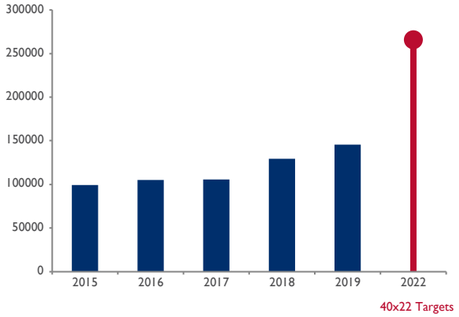
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



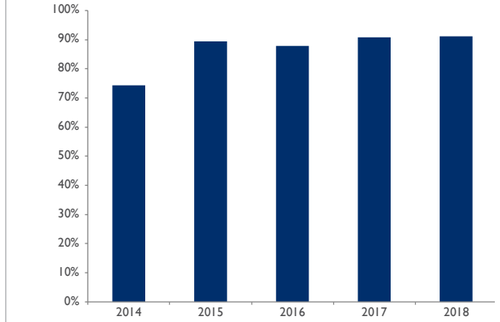
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

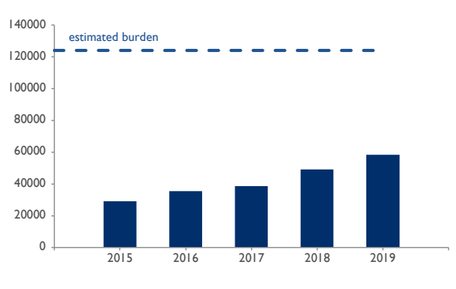


PERCENT OF PATIENTS SUCCESSFULLY TREATED

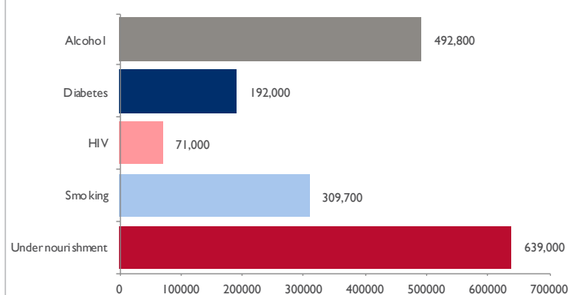


REPUBLIC OF **INDIA**

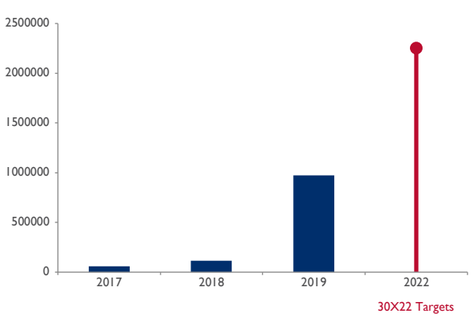
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



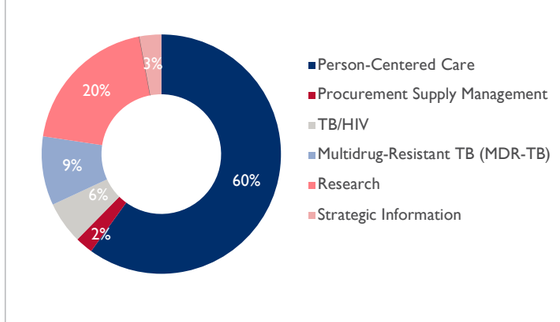
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



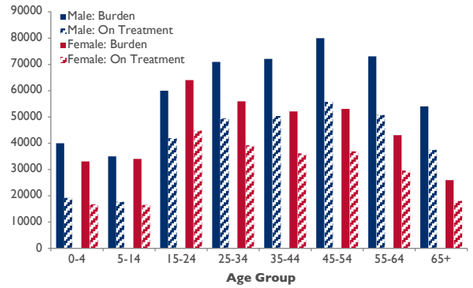
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



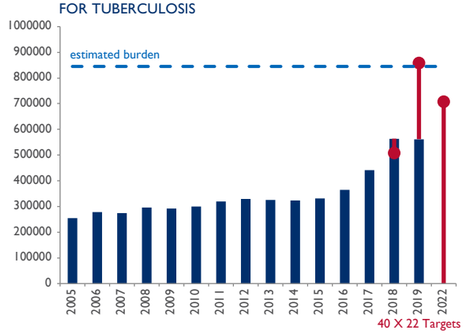
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



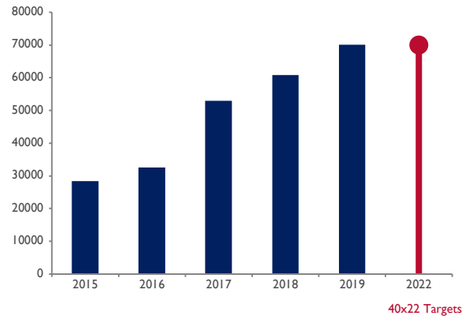
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



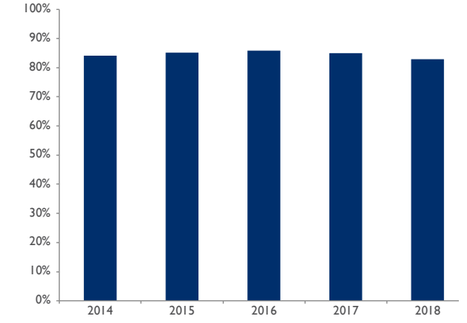
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

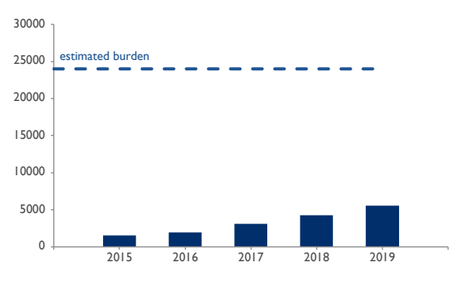


PERCENT OF PATIENTS SUCCESSFULLY TREATED

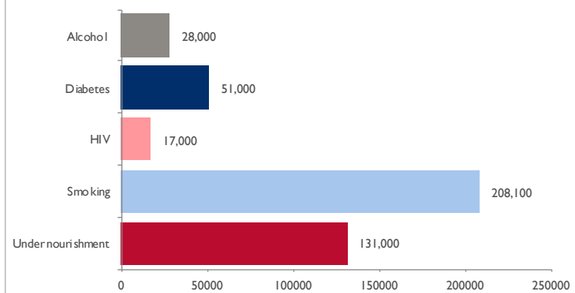


REPUBLIC OF **INDONESIA**

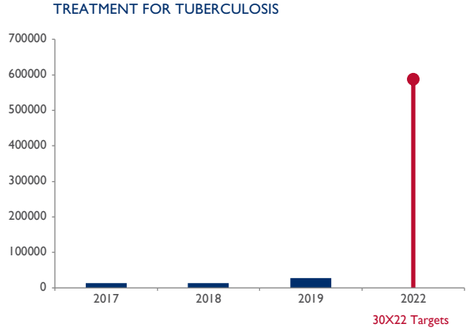
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



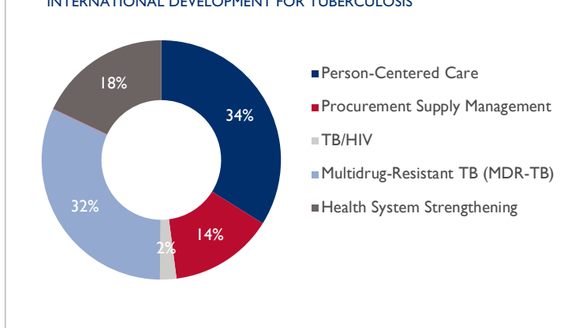
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



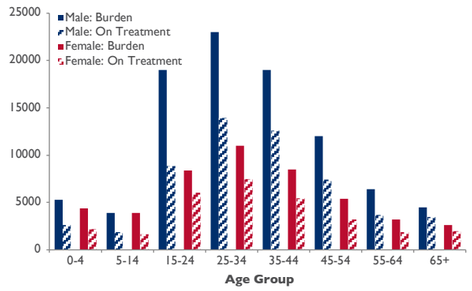
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



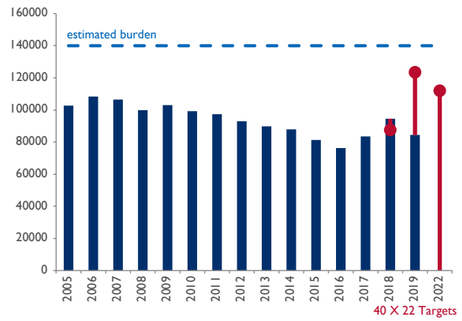
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



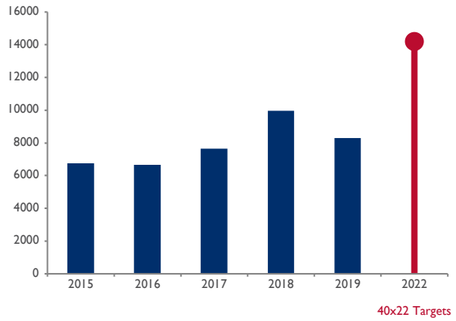
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



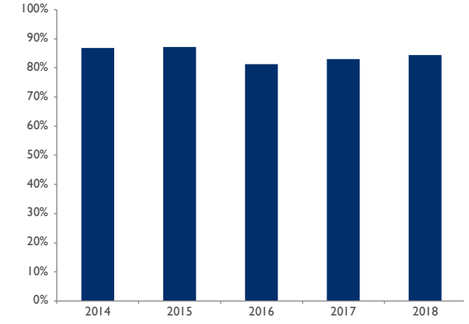
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

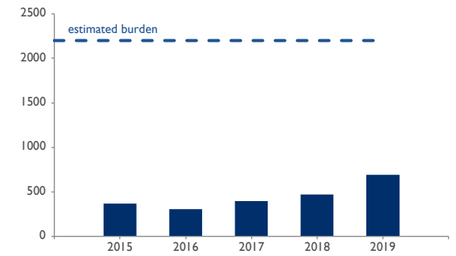


PERCENT OF PATIENTS SUCCESSFULLY TREATED

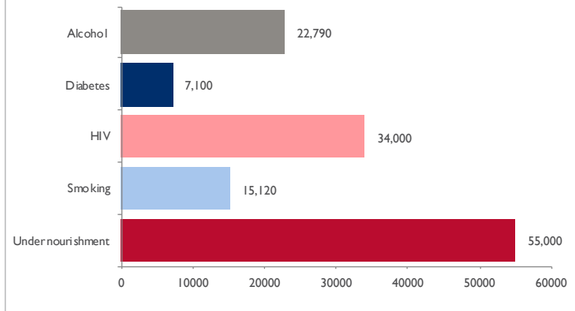


REPUBLIC OF **KENYA**

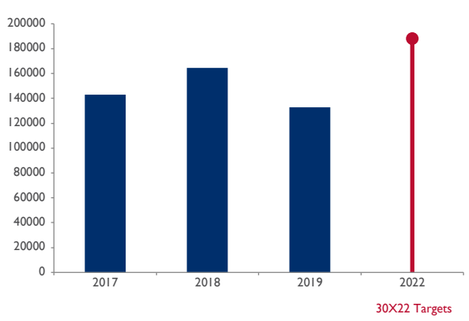
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



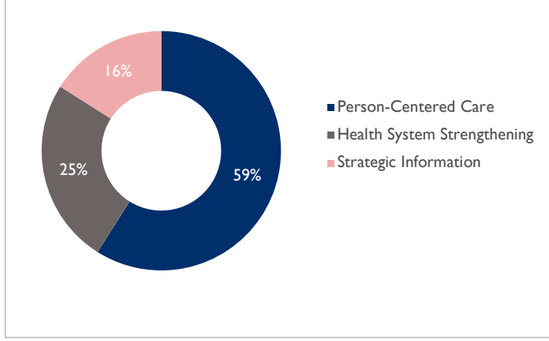
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



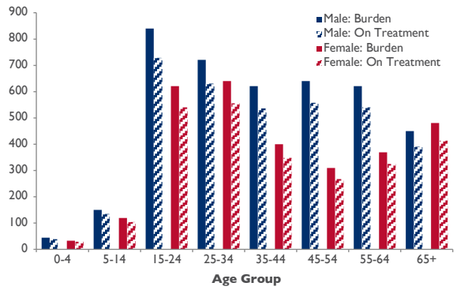
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



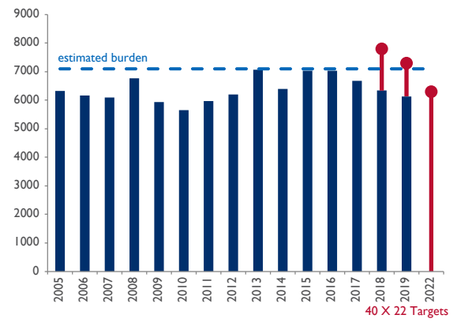
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



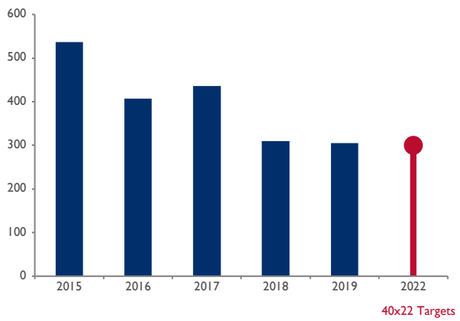
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



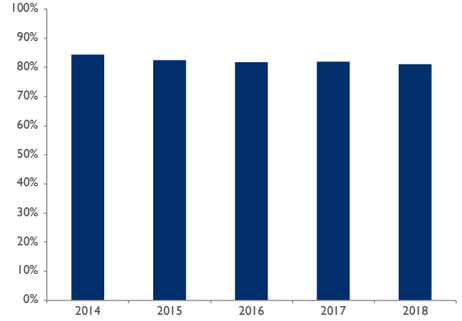
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

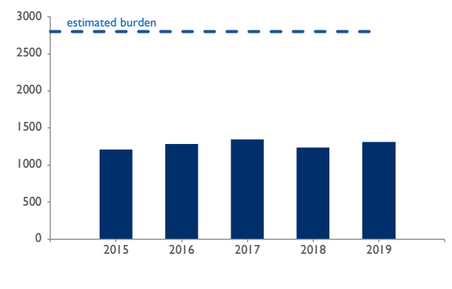


PERCENT OF PATIENTS SUCCESSFULLY TREATED

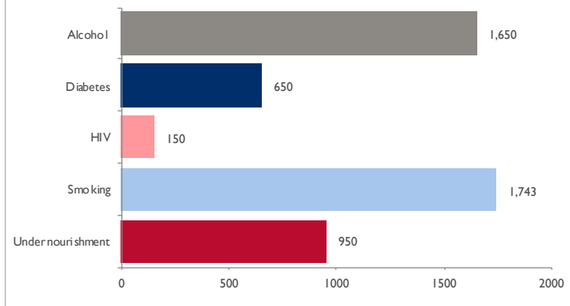


KYRGYZ REPUBLIC

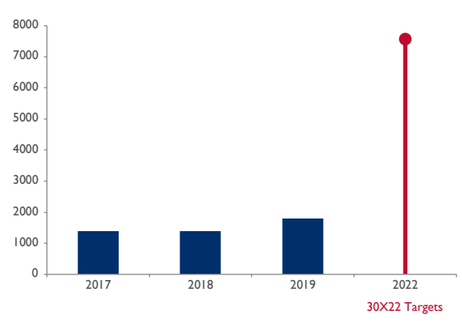
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



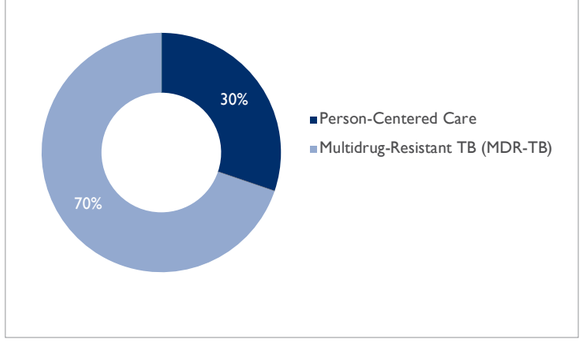
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



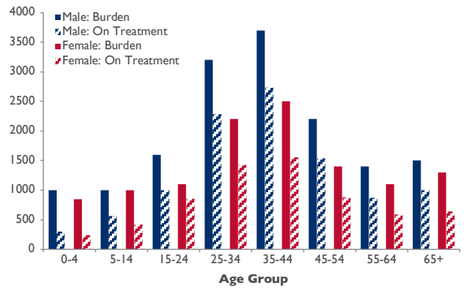
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



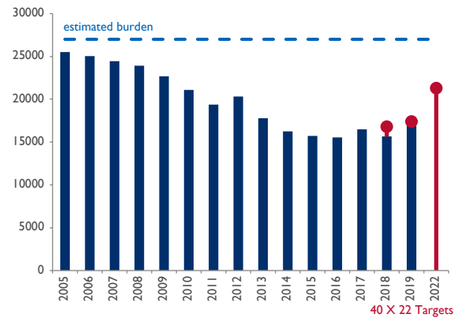
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



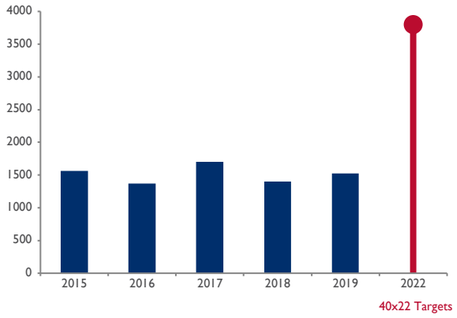
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



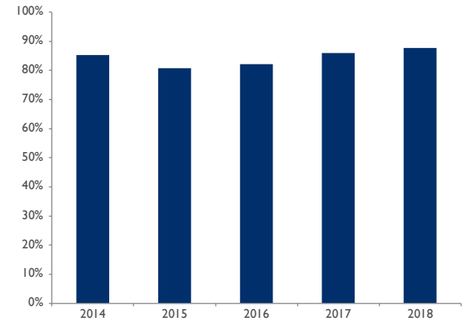
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

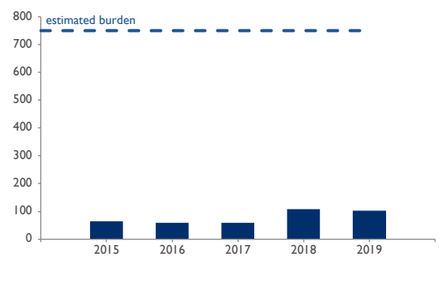


PERCENT OF PATIENTS SUCCESSFULLY TREATED

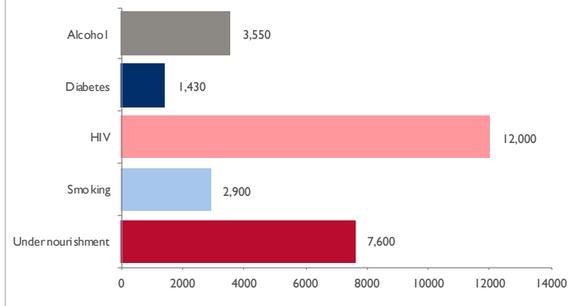


REPUBLIC OF **MALAWI**

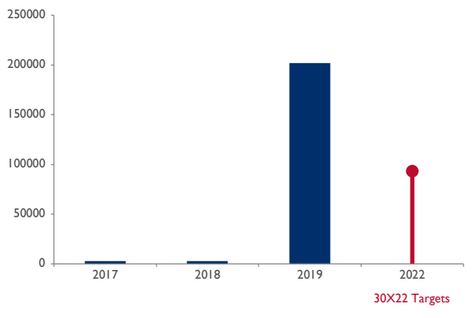
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



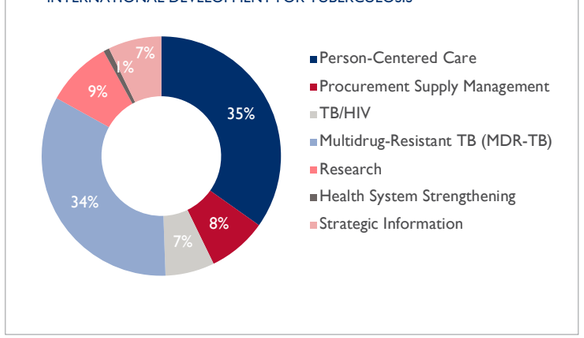
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



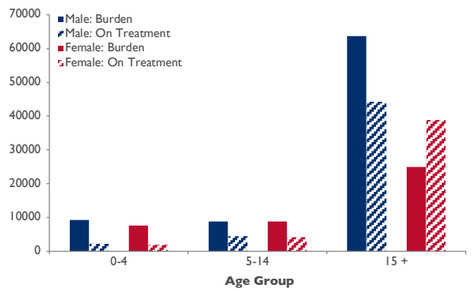
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



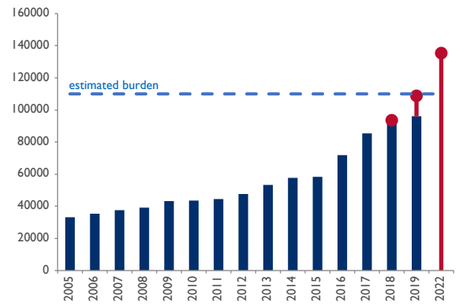
REPUBLIC OF **MOZAMBIQUE**

REPUBLIC OF **MOZAMBIQUE**

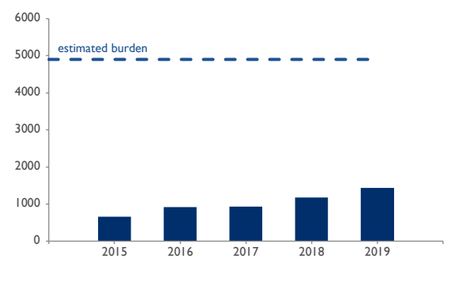
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



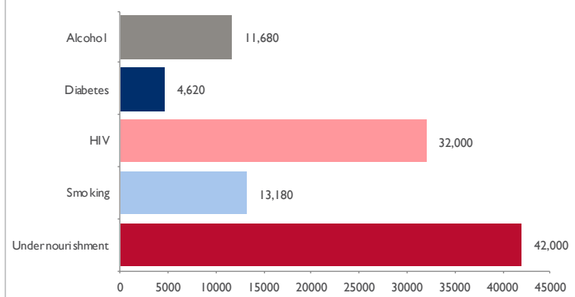
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



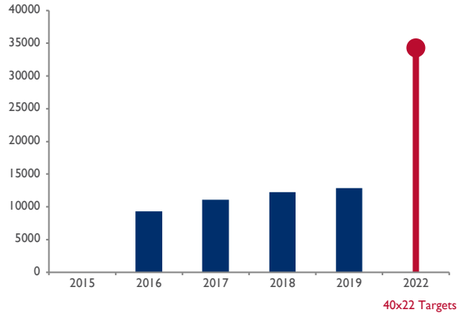
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



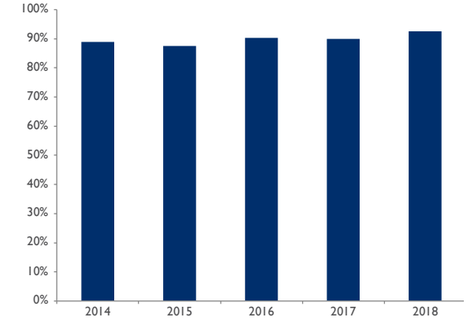
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



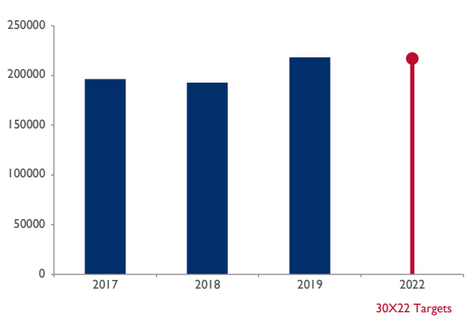
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



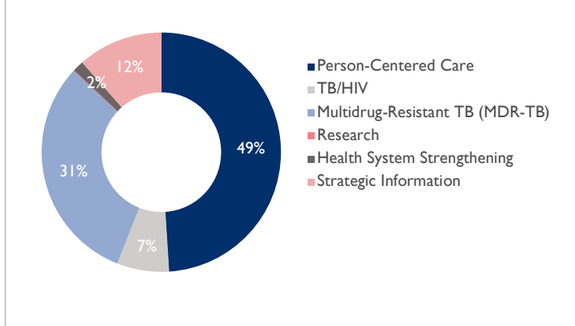
PERCENT OF PATIENTS SUCCESSFULLY TREATED



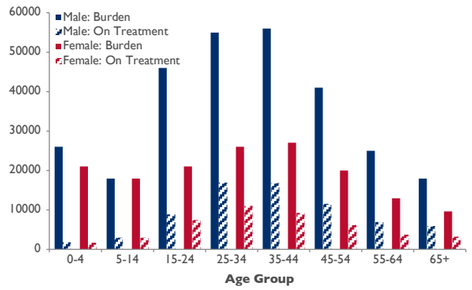
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



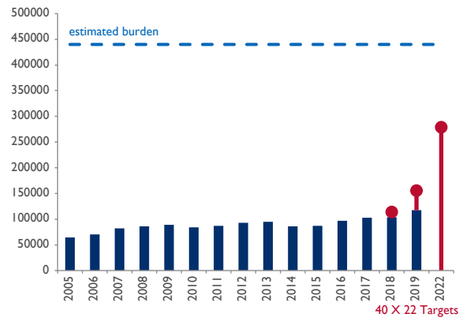
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



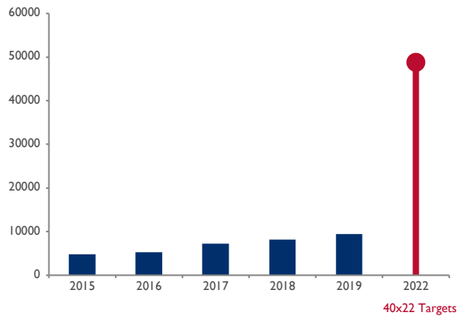
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



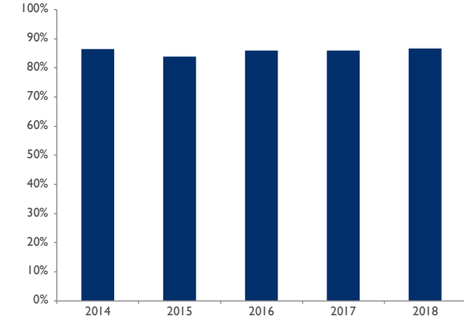
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

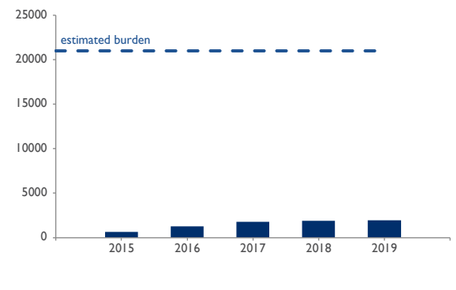


PERCENT OF PATIENTS SUCCESSFULLY TREATED

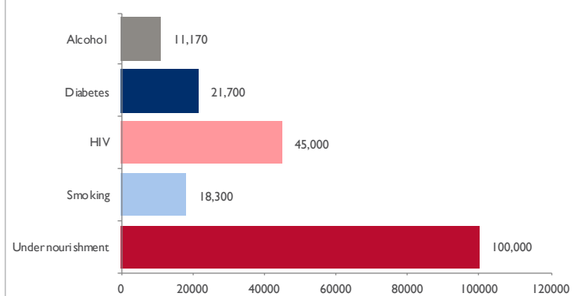


REPUBLIC OF **NIGERIA**

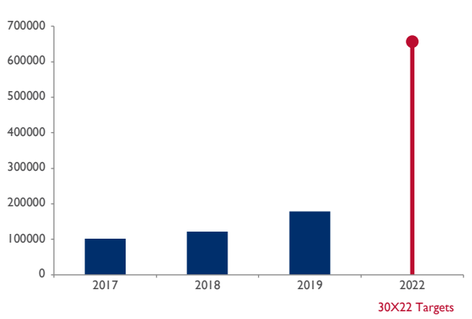
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



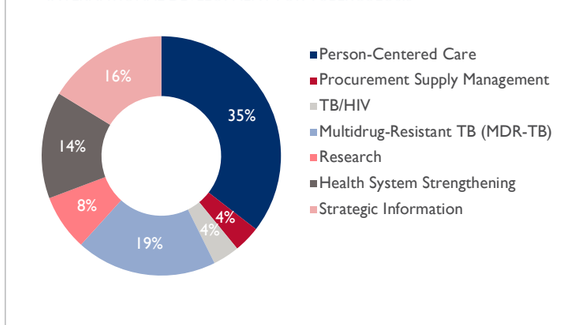
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



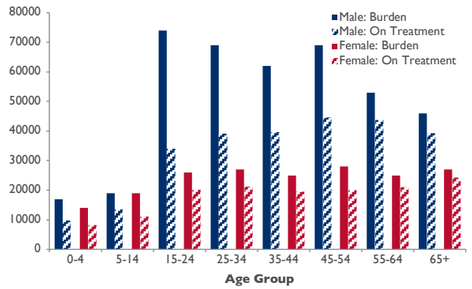
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



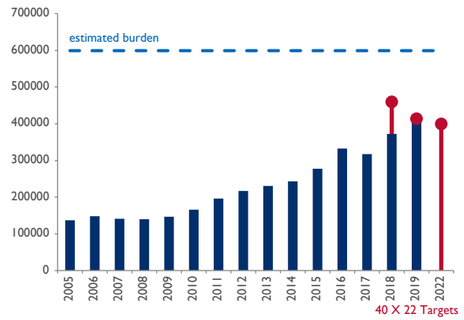
REPUBLIC OF THE **PHILIPPINES**

REPUBLIC OF THE **PHILIPPINES**

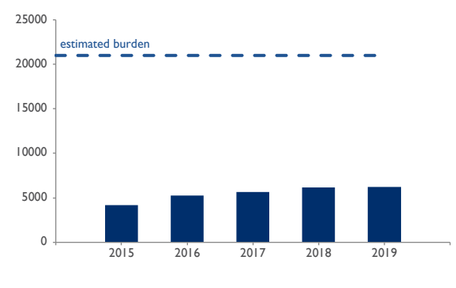
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



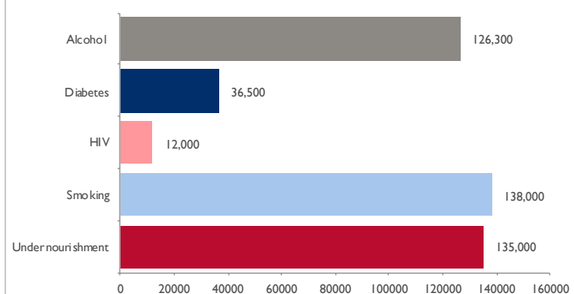
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



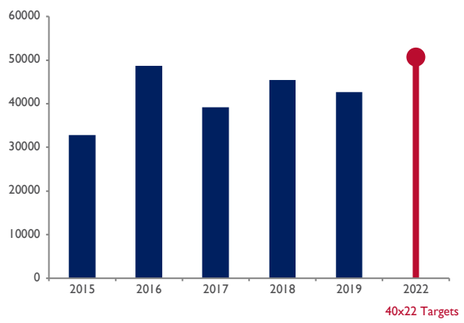
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



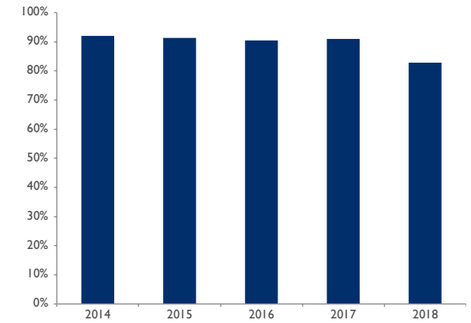
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



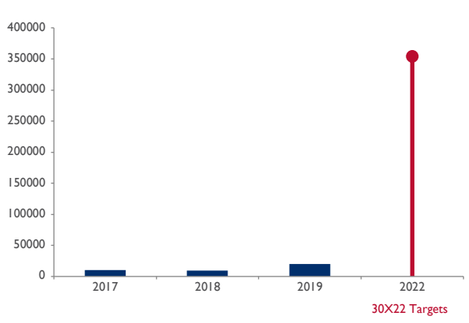
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



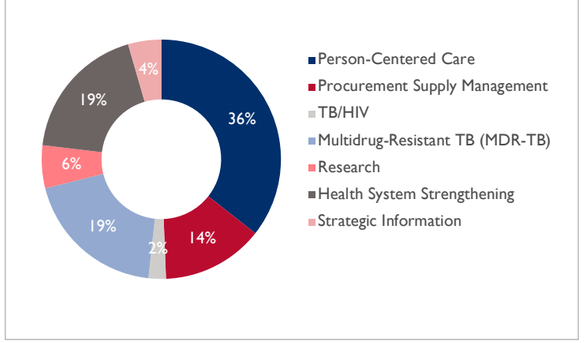
PERCENT OF PATIENTS SUCCESSFULLY TREATED



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS

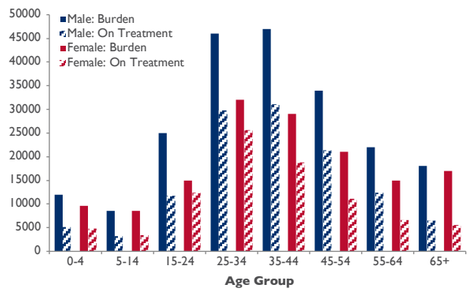


DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS

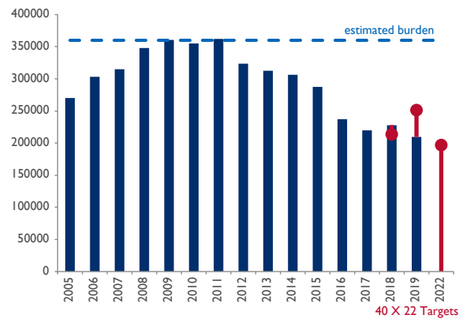


REPUBLIC OF **SOUTH AFRICA**

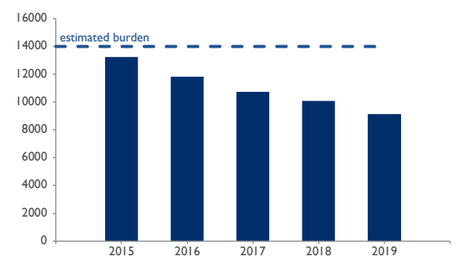
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



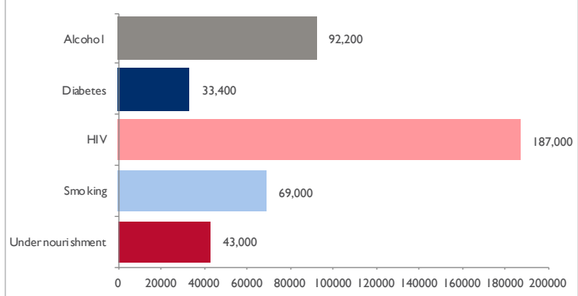
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



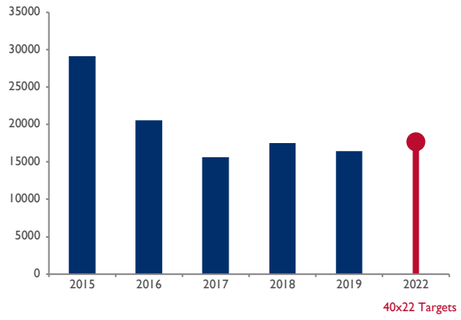
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



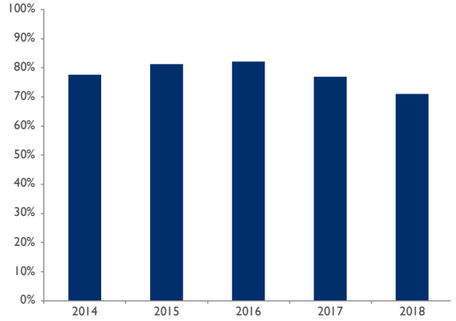
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



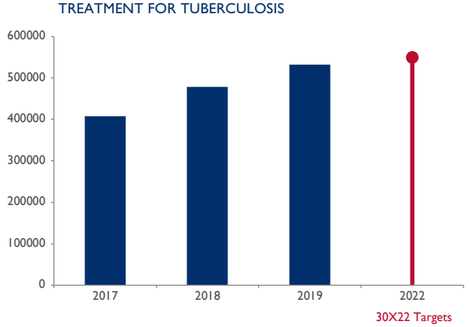
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



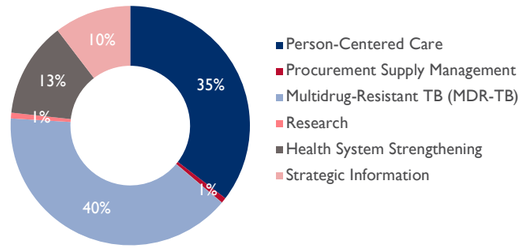
PERCENT OF PATIENTS SUCCESSFULLY TREATED



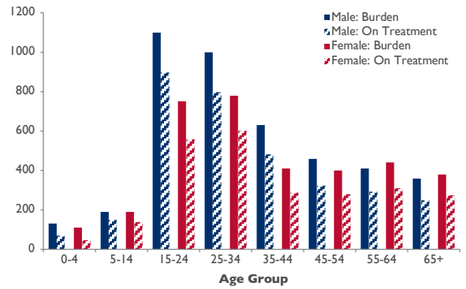
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



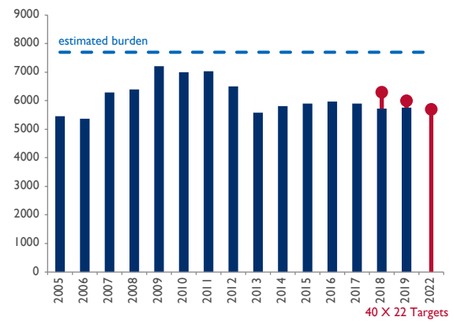
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



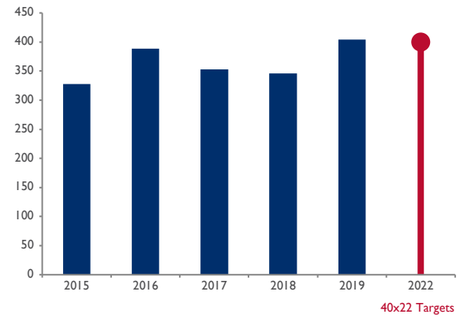
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



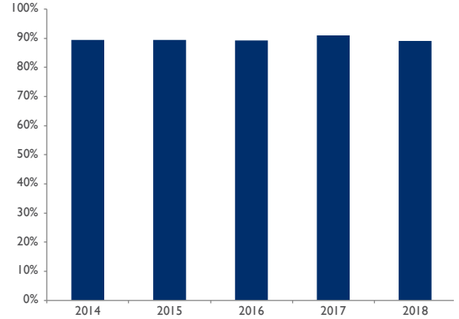
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

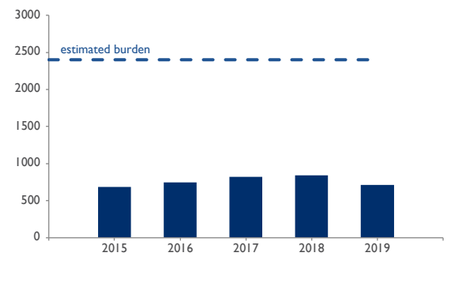


PERCENT OF PATIENTS SUCCESSFULLY TREATED

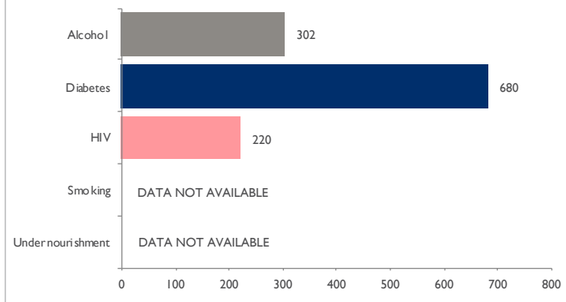


REPUBLIC OF **TAJIKISTAN**

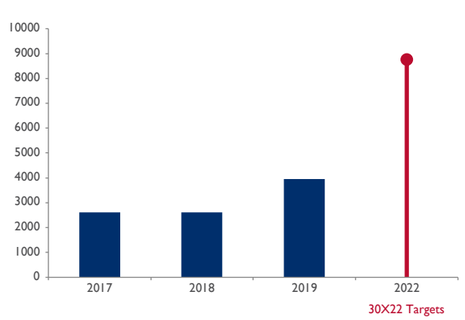
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



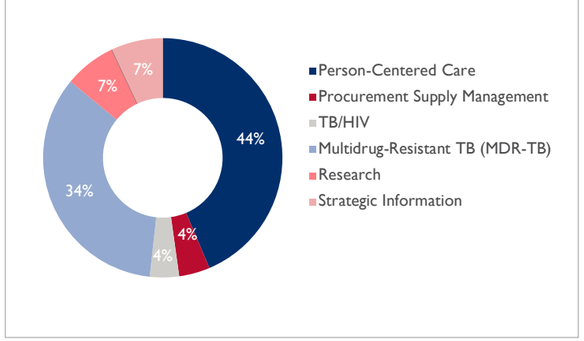
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



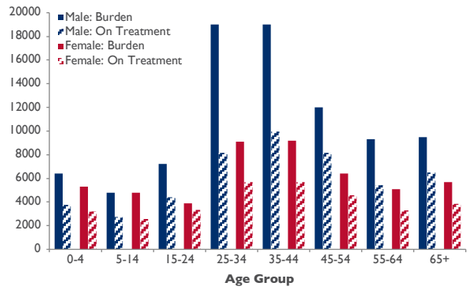
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



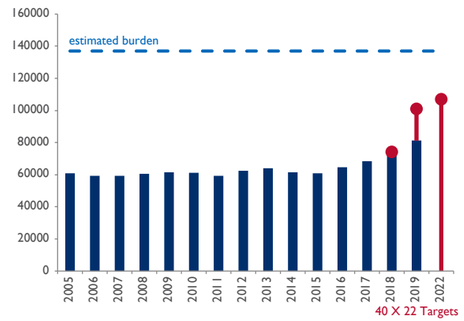
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



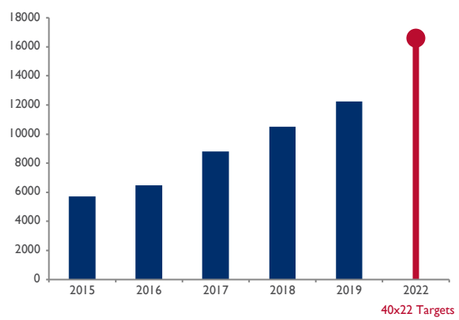
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



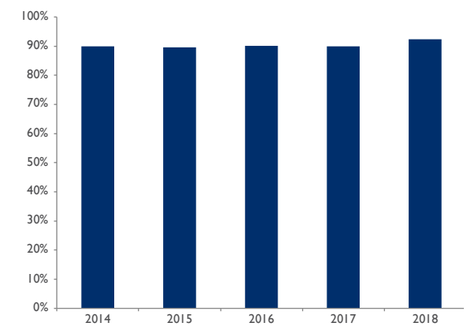
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

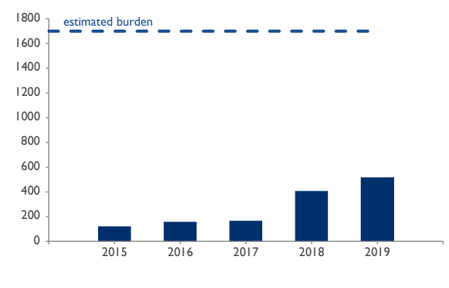


PERCENT OF PATIENTS SUCCESSFULLY TREATED

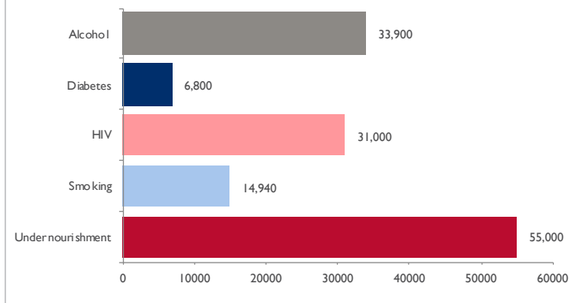


UNITED REPUBLIC OF **TANZANIA**

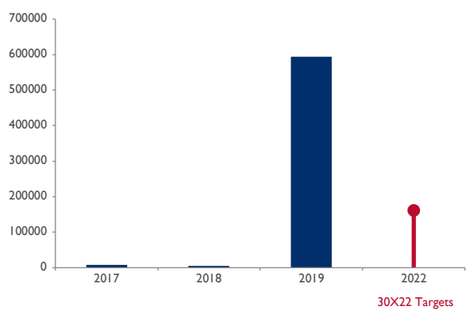
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



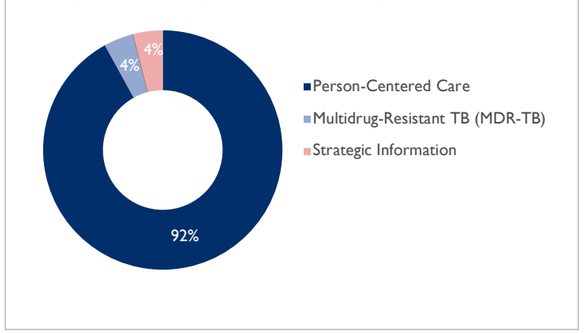
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



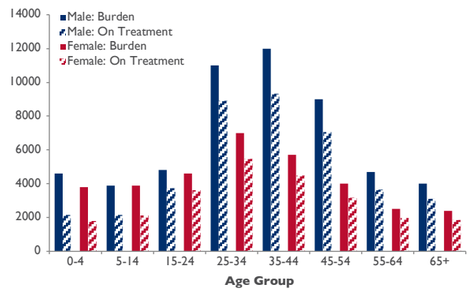
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



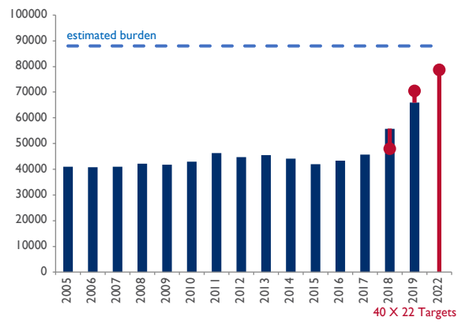
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



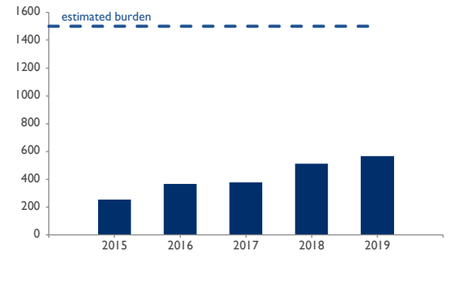
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



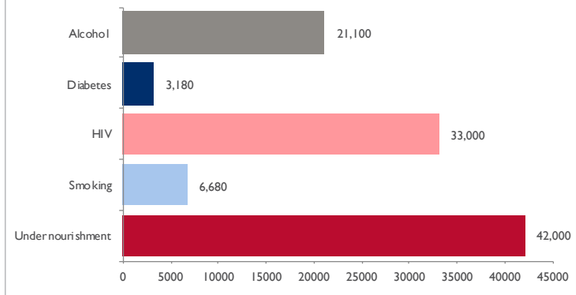
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



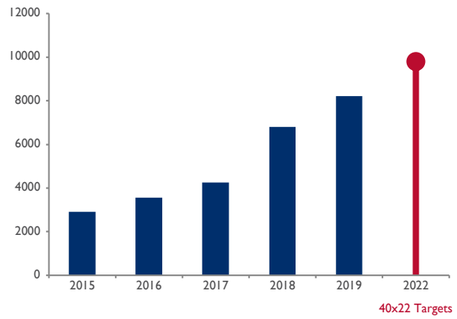
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



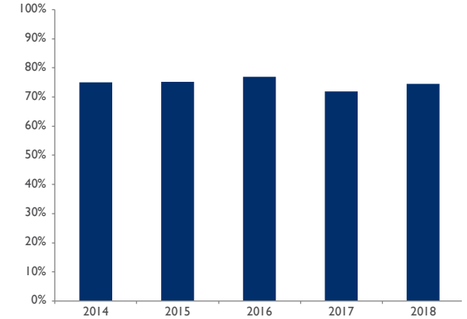
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



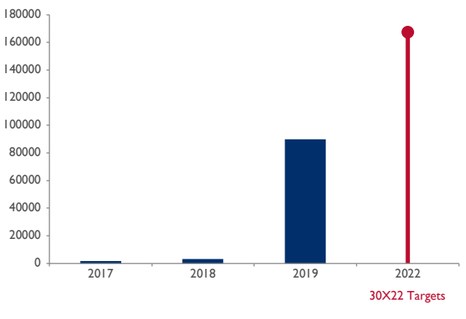
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



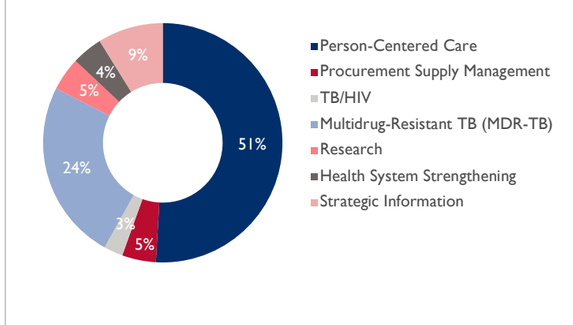
PERCENT OF PATIENTS SUCCESSFULLY TREATED



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS

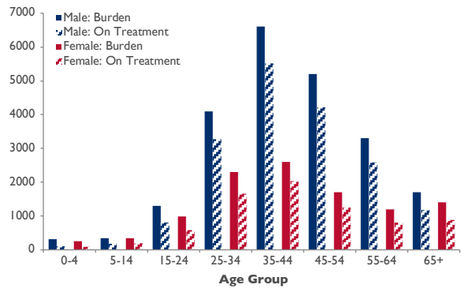


REPUBLIC OF **UGANDA**

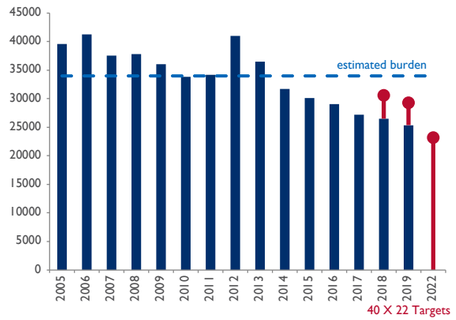
UKRAINE

UKRAINE

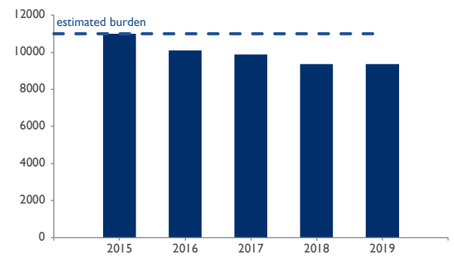
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



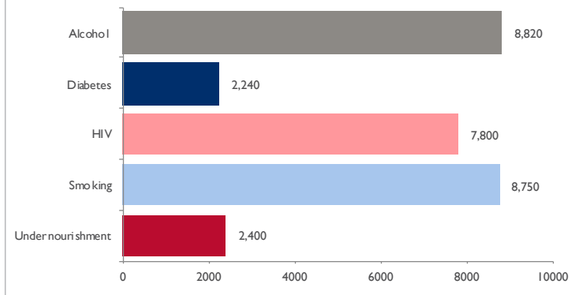
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



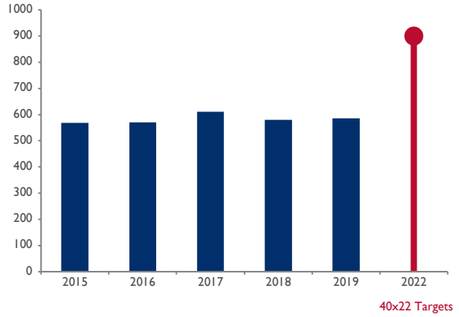
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



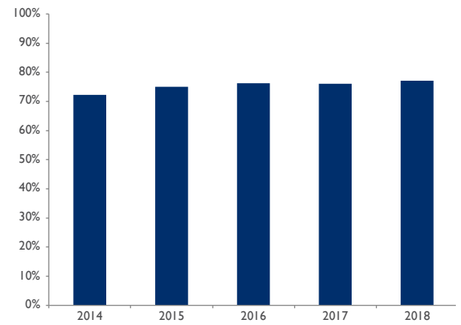
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



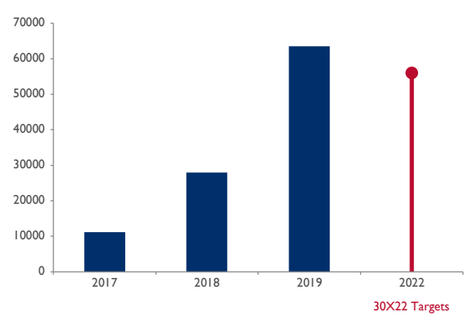
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



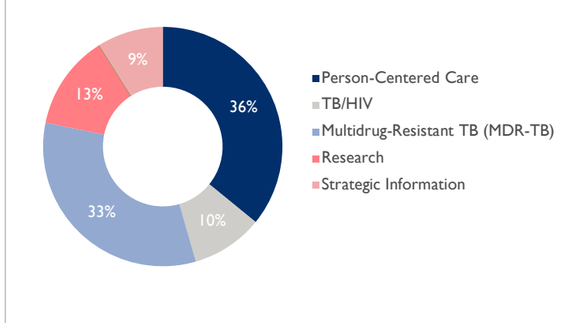
PERCENT OF PATIENTS SUCSESSFULLY TREATED



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS

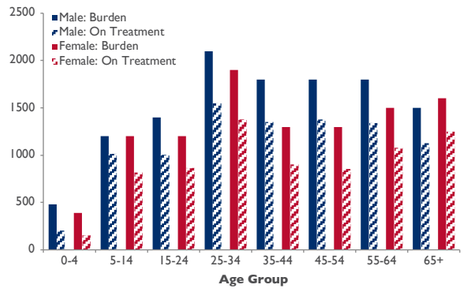


DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS

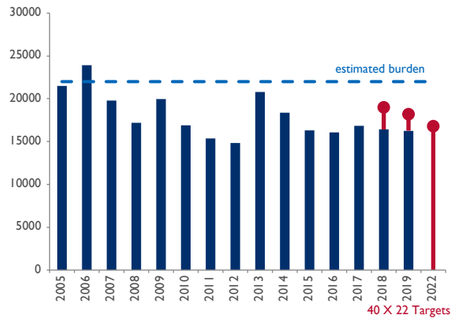


REPUBLIC OF **UZBEKISTAN**

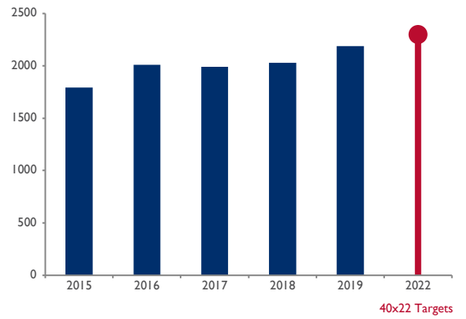
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



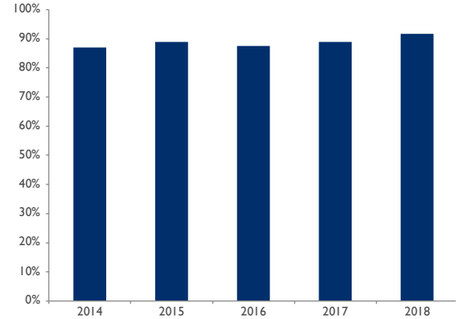
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

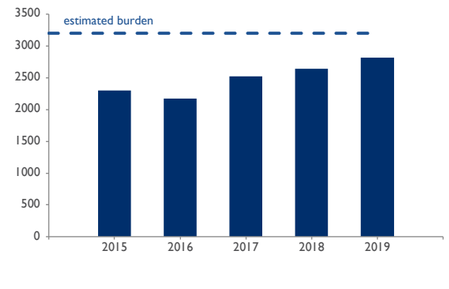


PERCENT OF PATIENTS SUCCESSFULLY TREATED

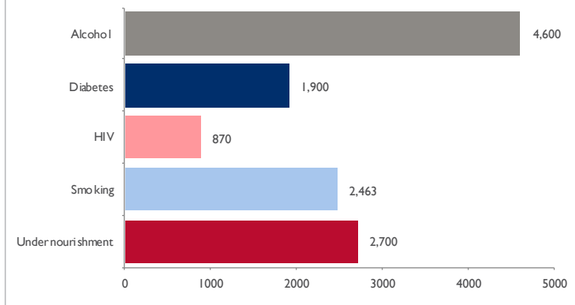


REPUBLIC OF **UZBEKISTAN**

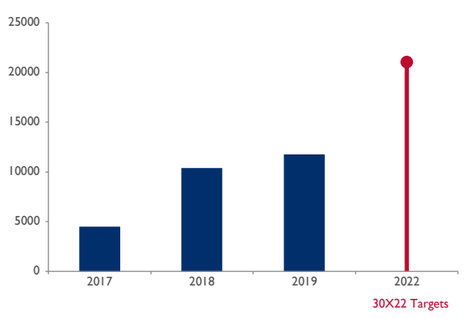
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



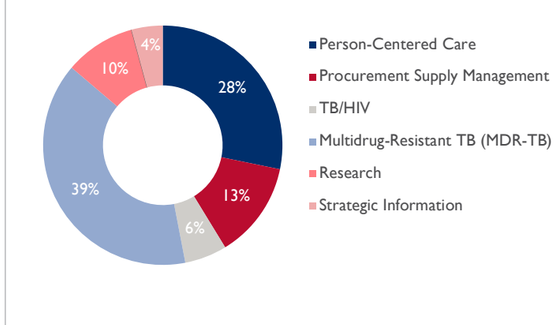
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



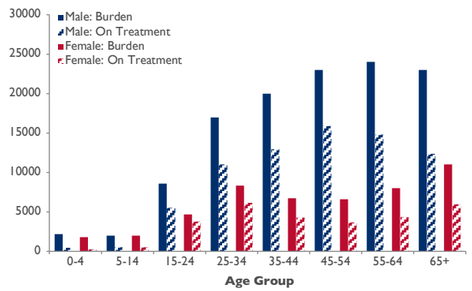
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



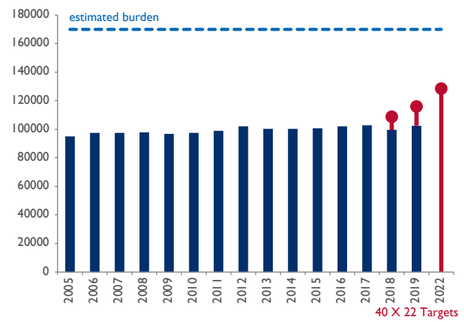
SOCIALIST REPUBLIC OF **VIETNAM**

SOCIALIST REPUBLIC OF **VIETNAM**

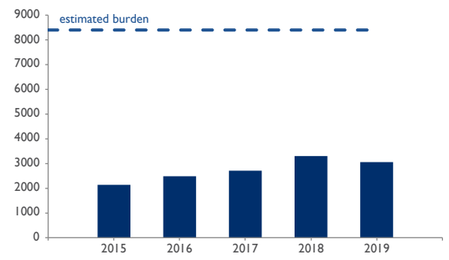
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



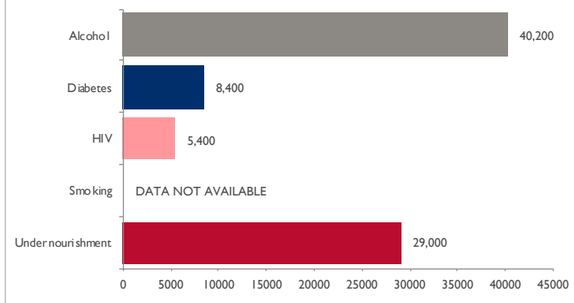
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



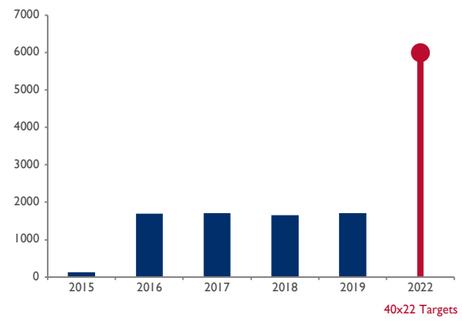
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



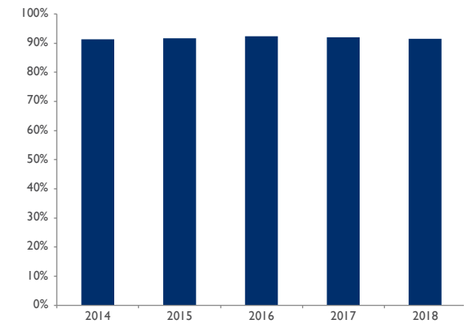
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



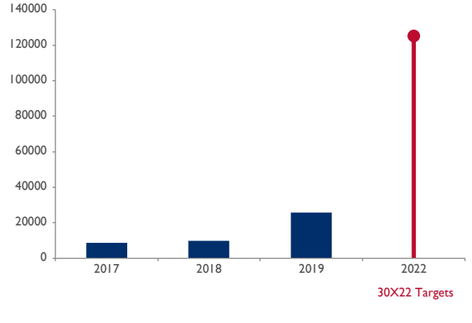
NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS



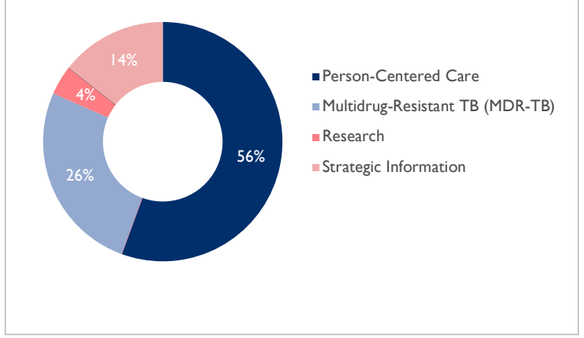
PERCENT OF PATIENTS SUCCESSFULLY TREATED



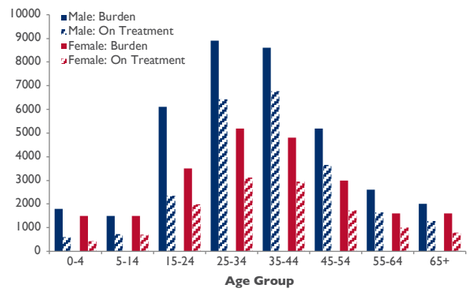
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



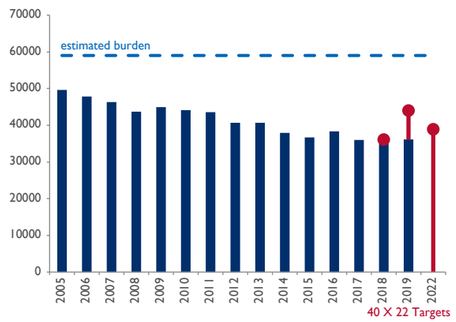
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



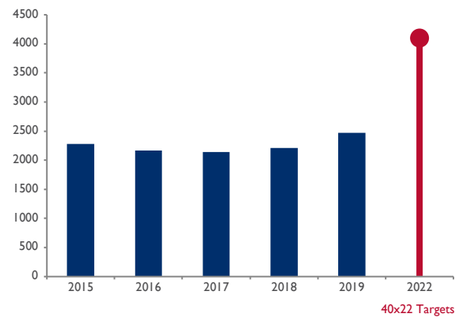
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



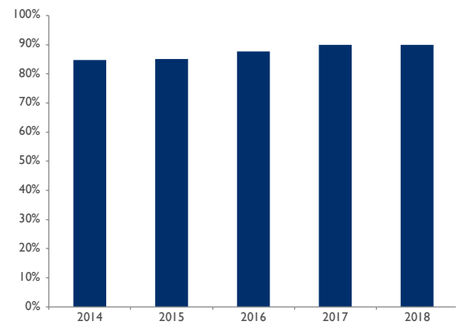
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

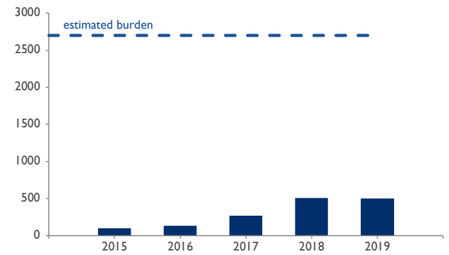


PERCENT OF PATIENTS SUCCESSFULLY TREATED

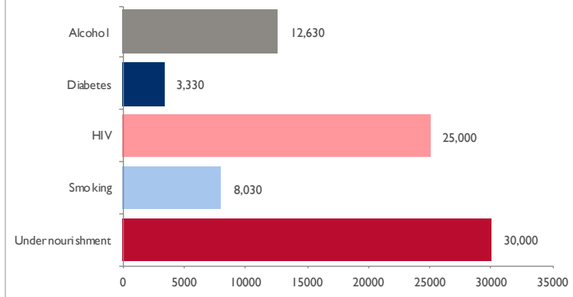


REPUBLIC OF **ZAMBIA**

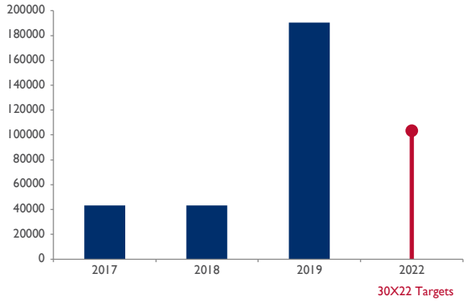
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



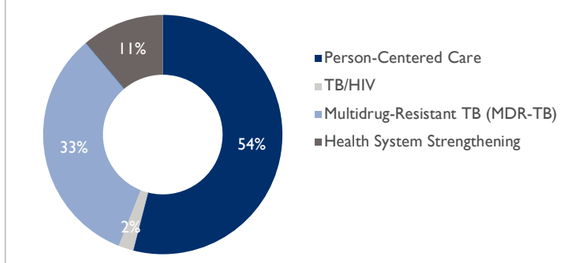
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



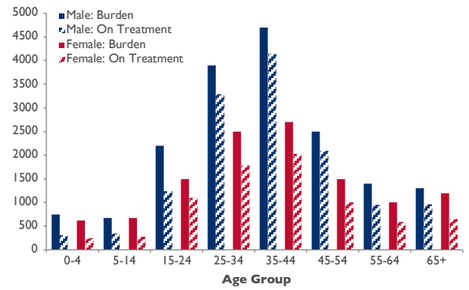
NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



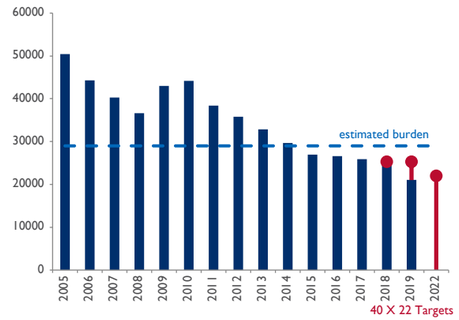
DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



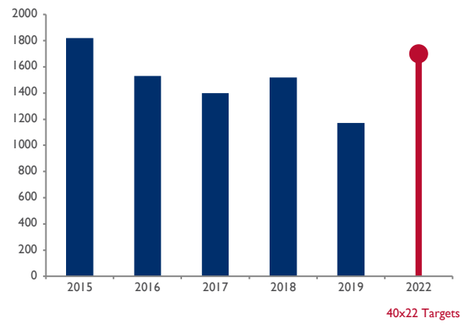
BURDEN AND NUMBER OF PATIENTS STARTED ON TREATMENT BY AGE AND SEX (2019)



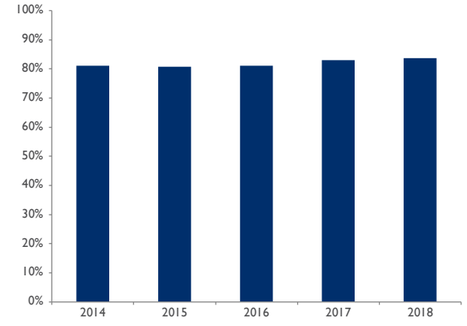
NUMBER OF PATIENTS STARTED ON TREATMENT FOR TUBERCULOSIS



NUMBER OF CHILDREN STARTED ON TREATMENT FOR TUBERCULOSIS

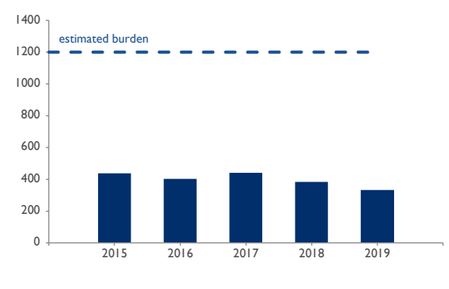


PERCENT OF PATIENTS SUCCESSFULLY TREATED

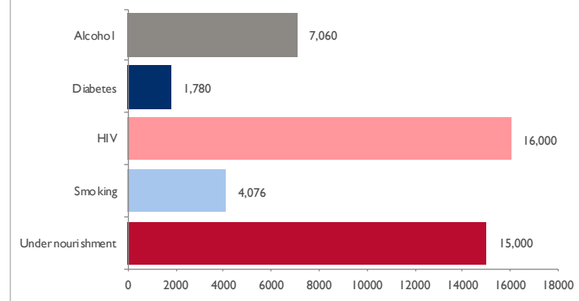


REPUBLIC OF **ZIMBABWE**

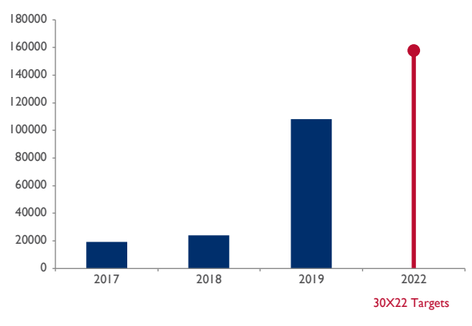
NUMBER OF PATIENTS STARTED ON TREATMENT FOR DRUG-RESISTANT TUBERCULOSIS



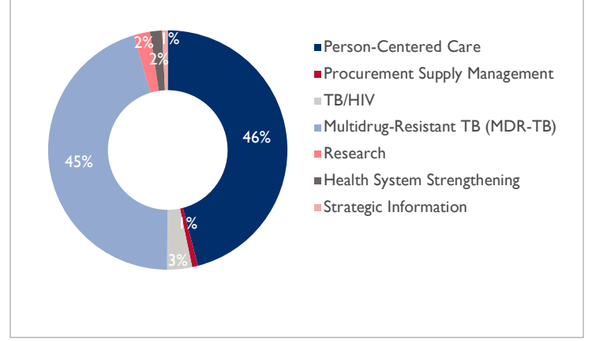
NUMBER OF TUBERCULOSIS CASES ATTRIBUTABLE TO TOP RISK FACTORS



NUMBER OF PATIENTS ON PREVENTIVE TREATMENT FOR TUBERCULOSIS



DISTRIBUTION OF FUNDING FROM THE U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT FOR TUBERCULOSIS



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